10¢ A COPY

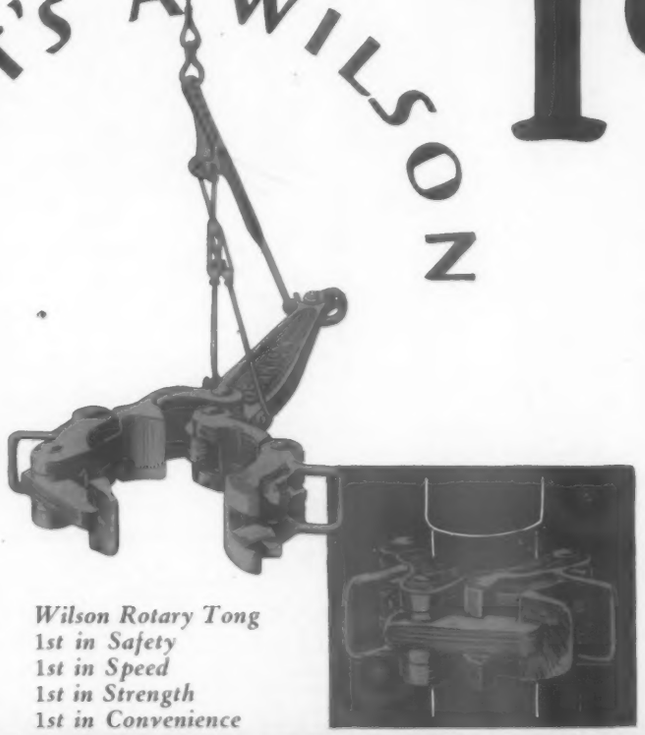
The OIL WEEKLY

Exclusively Devoted To The Production and Transportation of Oil and Gas

May 4, 1928 **Volume 49. No. 7**

Originators OF 2-step Spring-latch Tongs

IT'S A WILSON



Wilson Rotary Tong
1st in Safety
1st in Speed
1st in Strength
1st in Convenience

Wilson Engineers are the original inventors of the Wilson T-Head *Spring-Latch*. No other tong can embody this essential feature without infringing Wilson patents. The latch is in front, at the end of the jaws where a straight pull cannot strain the rugged T-Head of the Latch. Use of four jaws permits perfect fitting around pipe, adapting the tong to the pipe much better than fewer jaws. The Spring-Latch with 2-Step lug adapts the tong to different diameters without adjustment. The lever action distributes the pull *evenly*. The Rollover Lever permits reversal within 10 seconds.

Each of the above features was invented by Wilson. Each is *patented*. So, if you want *Safety, Speed, Strength* and *Convenience* you must use a Wilson Tong!

Carried in stock by your Supply Companies

Wilson Oil Tools Corp.
DISTRIBUTORS FOR
Wilson & Willard Mfg Co.

Factory and Distributor's Office — It's a Wilson — 2301 East Vernon Ave. Los Angeles, Calif.

Factory Representatives:
Tulsa, Okla., 409 Atlas Life Bldg.
Houston, Texas, 219 Post-Dispatch Bldg.
Fort Worth, Texas, 812 Dan Waggoner Bldg.

Fishing Tools Drilling Tools

AMERICAN IRON & MACHINE WORKS, INC. · OKLAHOMA CITY ·

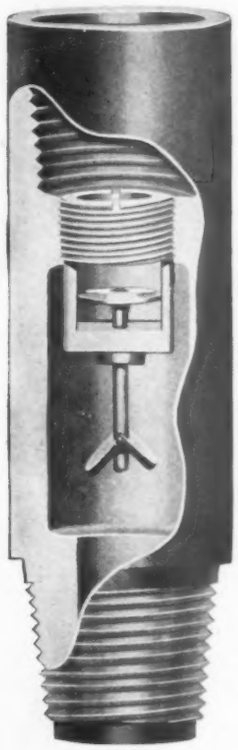
There Is No Spring...
to get out of order

In the American Float Valve. This means no movable parts when the fluid is going through. It also means that the passage of the fluid won't cut out your valve and seat—because there's no spring to press against the valve and the fluid has a free passage. The hole through the valve seat is the same size as the hole through the tool joint.

Another convenient feature of the American Float Valve is that it's easily milled out—with your inside pipe cutter—when you have a line of drilling pipe stuck.

The American Float Valve does all you expect of such a tool. It's easily inserted in a string of drill pipe. It is a reliable safeguard against the damages which result from parted drill pipe. You won't find a float valve more completely designed for your convenience than the American.

Complete descriptive details, weights and prices on the American Float Valve, or any other of the American tools listed below, will be mailed to you on request. Write for the American Catalog of Oil Field Equipment and ask—at your nearest supply store—about the American line.



Cutaway illustration of the American Float Valve.

American Iron and Machine Works, Inc.

Manufacturers of Oil Field Equipment

OKLAHOMA CITY, OKLAHOMA

American Oil Field Equipment

American Releasing and Circulating Overshots
American Rock Bit Wrenches
American Milling Shoes
American Flexible Couplings for Rock Bit Lubricators
American Steel Tool Houses
American Forged Steel Wall Hooks
American Rock Bit Breakout Blocks
American Rock Bit Cone Fishing Sockets
American Paraffin Bits
American Female Die Nipples
American Tapered Taps
American Forged Steel Subs
American Rotary Shoes
American Cone Fishing Baskets
American Steam Lubricators
American Combination Reverse and Throttle Levers
American Side-Tracking Mills
American Rock Bit Lubricator Wash Pipe Attachments.
American Rotary Milling Tools
American Myracle Sucker Rod Sockets
American Surface Bit Blades for Rock Bits
American Drill Pipe Float Joints

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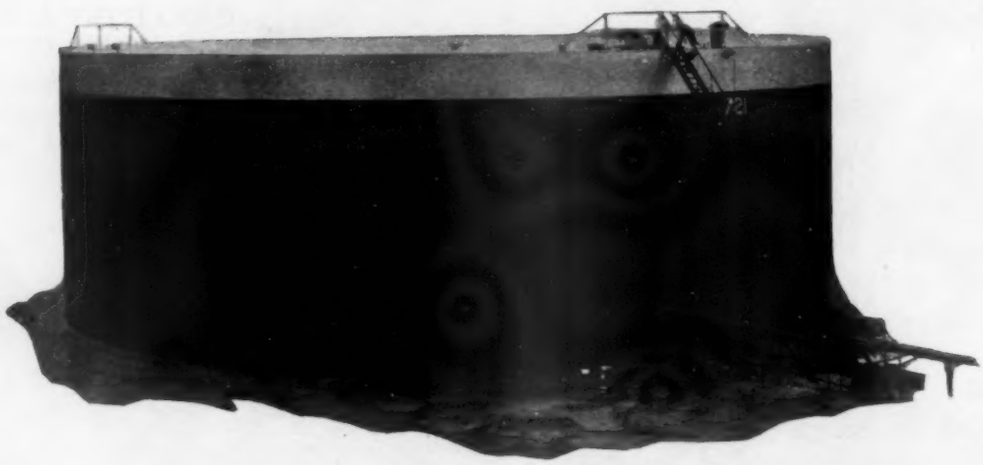
GASO PUMPS
for every oil industry need

Say you saw it in The OIL WEEKLY

Wiggins Breather Roofs

Stop Breathing losses on standing storage!



YOU can't stop the daily variation in temperature—nor the resulting change in oil vapor volume.

But you can stop the loss of this valuable vapor out through the vent pipe. Instead of letting vapor-laden air out when the temperature rises and fresh air in when the temperature falls, you can keep the same air under the roof continuously and save this enormous loss from your standing storage.

A Wiggins Breather Roof accommodates all ordinary changes in vapor volume without any loss by a simple up-and-down flexing. A volume relief valve and a vacuum relief valve protect the tank from injury before it reaches either extreme position.

These roofs were thoroughly tested in experimental installations before they were offered to the oil industry. Now they have been proved out in actual operation. They are backed by the same organization that produced the well-known Wiggins Floating Roof for working storage and that has, for many years been manufacturing tanks for the storage of oil, water and other liquids.

Our booklet, "The Wiggins Breather Roof" contains detailed descriptions and illustrations of this latest development in tank roofs. Ask our nearest office for your copy.

CHICAGO BRIDGE & IRON WORKS

Dallas—3338 Magnolia Bldg.
Chicago—2142 Old Colony Bldg.
New York—3144 Hudson Terminal Bldg.
Cleveland—2241 Union Trust Bldg.
San Francisco—1050 Rialto Bldg.
Havana, Cuba—Apartado 2507.

FLOATING *for working storage* **WIGGINS ROOFS** BREATHER *for standing storage*

OW-5-4-Gray

Say you saw it in The OIL WEEKLY

On The Firing Line

These photographs show a 12" Landis Pipe Threading Machine, owned by the Marland, in service a long way from a power line. The machine is being driven by a Fordson Tractor.

Regardless of the location and the convenience of power, it is necessary to have the Landis on the job if well formed, full tapered threads are to be produced. That the Marland Refining Company knows the importance of having a Landis on the job is well evidenced by these pictures.

Many oil producing companies have installed Landis Pipe Machines particularly to meet the A. P. I. Standards of threads. It is well known that the Landis Chaser is the only threading tool that will cut a full tapered thread at all times. This is because the chaser is ground on the cutting edge and *not* in the throat. Each grinding gives the effect of a brand-new chaser. The contour is not changed. Therefore a full tapered thread is produced whether the chaser is new or about worn out.

Follow the practice of the big oil companies who buy on a basis of efficiency and economy. This policy is best whether your requirements are many or few. This practice means good threads and profits.

Write us your requirements today.

Landis Machine Company

Waynesboro, Pa.

Detroit Office:
5928 Second Blvd.

LANDIS TRADE MARK

SMALL IN SIZE ..... GREAT OTHERWISE

The Star of them all!

Unbreakable-Compact Light-Positive in Grip

ENTIRELY WROUGHT STEEL

SAW TEMPERED TEETH

DROP-FORGED BASE

DROP-FORGED JAWS

WROUGHT STEEL NUT

DROP FORGED HANDLE

Strength to stand terrific abuse without danger of breaking; power that grips instantly and positively, yet releases readily; compactness and lightness that spell convenience for the user countless times a day—that's the "Vulcan" *Drop-Forged* Vise.

Small wonder that it outshines all others in popularity. GENUINE "Vulcan" superiority is not confined to any one quality. In efficiency, durability, and economy it's a star.

It will pay you to know more about "Vulcan's" ability to help you and your business. Literature?

GENUINE WILLIAMS

SUPERIOR DROP-FORGED TOOLS

"VULCAN"

DROP-FORGED

CHAIN PIPE VISE

J. H. WILLIAMS & CO.

"The Drop-Forging People"

New York BUFFALO Chicago

W

Trade Mark

Say you saw it in The OIL WEEKLY

A Letter from Harry G. Nye

NYE

Thin Blade Cutter Wheels Knurled or Smooth Edge

Made to Fit
All
Standard Makes
of
Pipe Cutters

Knurled Edge

Smooth Edge

Nye cutter wheels are made from the highest grade tool steel, and are hardened and tempered in oil. Blades about 1/16th of an inch thick and straight from hub to cutting edge. Cut with one-third the time and power required by the old type wheels. And also they are—

ABSOLUTELY GUARANTEED

To the Oil Men of the U. S. A.

Fellow Citizens:

One of the easiest ways to see how well off you are is to see how much worse off some other fellow is. The man who has lost one eye is a darned sight more than twice as lucky as the man who has lost two.

Take the underwear business. A couple of years ago the ladies decided to quit wearing anything between the knee and the neck. To an underwear man, that is about the same as it would be to a plumber if the dear things decided not to have any pipes between the curb and the kitchen.

As a result the ladies have been getting rheumatism in the knee, and the underwear men have been getting it in the neck. In fact it has been hard on everybody's neck, whether he was in the underwear businss or not. Not all the men who are interested in underwear are interested financially.

Even the men are going around in their BVDs in the winter and in summer, in sickness and in health, et cetera and so forth. I remember when I used to have one weight for winter, and another for fall, and another for spring, and another for summer. Now we wear the same darn weight the year around, and sometimes the same suit.

It is hard on the underwear men, but it is a fine thing for the doctors and the undertakers. So don't be downhearted. Be uphearted, if anything. The less people wear, the more steam heat they need. It's hard on the shirt-fitter, but it's great for the steam-fitter. And, as far as the plumber is concerned, baths have not gone out of style, at least not yet.

There is another thing that is fine for the steamfitter and the plumber. That's Nye Tools. They're all right in fall and spring, summer and winter. A silk shirt may make you shiver more, but a Nye tool will make you sweat less. They work so much easier. And they last so much longer. Why? Because they are made so much better.

Yours for more business, with less sweat,

HARRY G. NYE,

Otherwise Known As

THE NYE TOOL & MACHINE WORKS

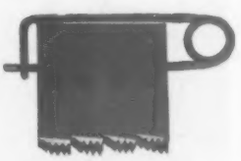
4120-30 Fullerton Avenue

Chicago, Ill.

(Copyright, 1928, by Harry G. Nye. All rights reserved)

The rugged construction and few working parts account for the simplicity and durability of these Nye Receding models. They do the work easily and efficiently.

No. 1 Nye Receding Pipe
Threader, complete ....$9.60 net
West of Rocky Mountains $10.80



NYE (Toledo Type) Chasers fits Nos. 1A and 2 NYE (Toledo Type) Stocks

Each set is guaranteed in every particular. Will cut much easier than other similar dies.

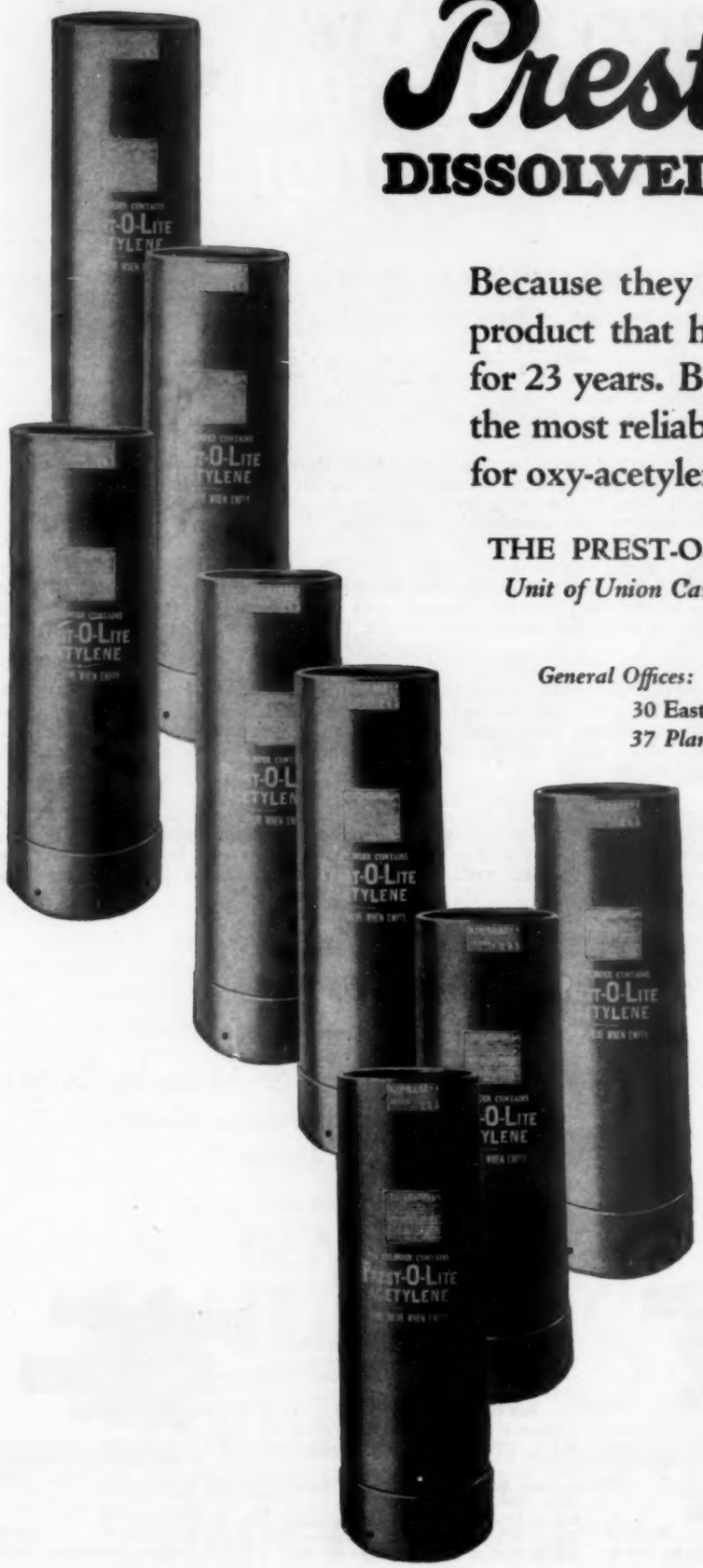
No. 1, 1" to 1½" ..$ .75 per set net
No. 1, 2" .....$1.25 per set net
No. 2, 2½" to 4" ..$3.60 per set net

The No. 1A is the same as the No. 1, except that it is equipped with a ratchet for work where space is restricted.

No. 1A Nye Receding Pipe
Threader, complete ...$12.00 net
West of Rocky Mountains $13.50

People keep right on buying

Prest-O-Lite
DISSOLVED ACETYLENE



Because they have confidence in a product that has been manufactured for 23 years. But mainly because it is the most reliable and economical fuel for oxy-acetylene welding and cutting.

THE PREST-O-LITE COMPANY, INC.
Unit of Union Carbide and Carbon Corporation

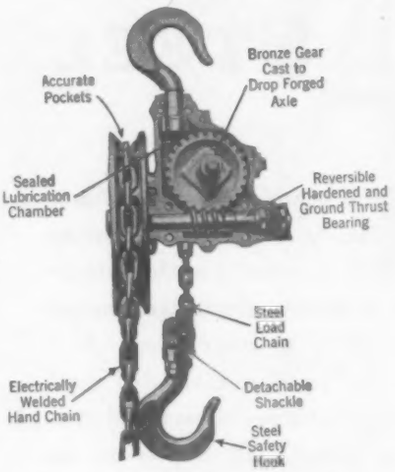
UCC

General Offices: Carbide and Carbon Building
30 East 42d St., New York
37 Plants—102 Warehouses

Say you saw it in The OIL WEEKLY

TRADE **YALE** MARK

Yale Screw-Geared Chain Blocks



YALE Screw-Geared Blocks utilizing the worm wheel and screw principle insure a remarkably smooth, even operation without jar or shock. The load is AUTOMATICALLY held suspended. Raising or lowering can only be accomplished by pulling the hand chain. Two steel load sheaves carry the chains and two steel chains carry the load.

The rotating mechanism is enclosed between two machined castings, all parts being thoroughly bathed in graphite and oil.

The drop forged detachable shackles and oval pins permit readily detaching lower cross-head and hook and lengthening or shortening the load chain without cutting or welding the last link.

Yale makes its own chain of heat treated steel, die-formed, electrically welded, forged and trimmed.

The Yale Screw-Geared Chain Blocks, in common with Yale Ball Bearing Spur-Geared and Yale Differential Chain Blocks, are all Yale made to insure highest efficiency and long service.

YALE MAKES

Yale Ball Bearing Spur-Geared Chain Blocks, Yale Screw-Geared Chain Blocks, Yale Differential Chain Blocks, Yale Roller Bearing Trolleys and Cranes, Electric Chain Hoists, Electric Industrial Trucks.

Factory Locking Equipment—To acquire locking control, security and convenience throughout the factory, use Yale Master Keyed Locks.

See the Yale Exhibit at the Foundrymen's Convention, Booths 318 and 320, Commercial Museum, in Philadelphia, May 14th to 18th.

The Yale & Towne Manufacturing Co.

STAMFORD, CONN., U. S. A.

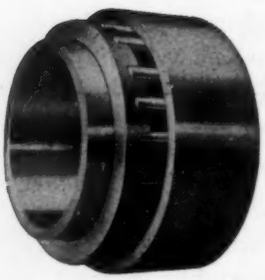
Canadian Branch at St. Catharines, Ontario

YALE **Hoisting and Conveying Systems**

YALE MARKED IS YALE MADE

The DIFFERENCE?

IT'S IN THE STEEL



AMERICAN ROLLER BEARING CO.
PITTSBURGH, PENNA.

Pacific Coast Representatives:

LOS ANGELES
Edward D. Maltby Company
321 West Pico Street

SAN FRANCISCO
Frank M. Cobbledick Co.
1031 Polk Street

The steel of which Type "C" American Heavy Duty Roller Bearings are made is a special analysis steel—with uniformly distributed strength and ability to resist wear. It is made in small quantities in small electric furnaces—always subject to exact control. Its inspections are rigid. Its tests are tough and thorough. If a shade away from the prescribed strict and narrow limits, it is not accepted for Heavy Duty Bearing use.

It costs more to make steel the way it is made for American Bearings but it pays more to use bearings built from such particularly made steel.

The difference in the steel may make the difference between speedy, satisfactory, uninterrupted drilling to completion and a lost string of tools, an abandoned hole—accidents, personal injuries, costly failures of equipment.

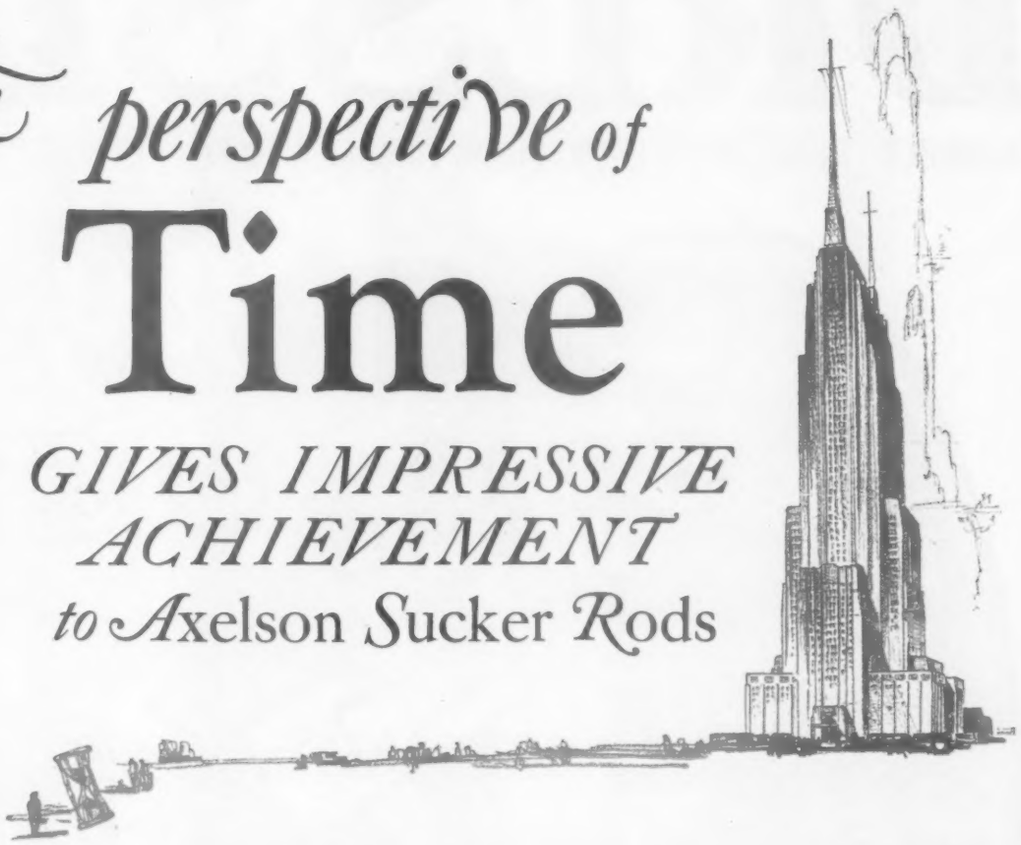
Your loads may be the heaviest but your heart will be light if you depend upon the

SAFE–SURE–SUCCESSFUL–STEEL OF

AMERICAN HEAVY DUTY TYPE "C" ROLLER BEARINGS

The perspective of Time

GIVES IMPRESSIVE ACHIEVEMENT to Axelson Sucker Rods



Towering ... into the sky, the skyscraper was not built in a day. Watching the workmen toil in the pit, you see no phenomenal change over night. But glance at the location later. The steel girders begin to shape. Week by week the framework rises upward. Finally the peak is reached.

The Axelson structure has been 36 years in the building. Hardly a month has passed but that some proven betterment has been placed into service, without exploitation. ... Each improvement is in itself a small part of the *ensemble* but in the aggregate over a period of time reflects *impressive achievement.*

For instance, here are a few of the improvements introduced during the past two years:

1. The processing of a highly technical sucker rod steel, to permit new standards of accuracy in finishing and to exceed the field requirements that may be put in practice in the future.
2. Heat treatment by an intricate process that has been subjected to many years of research and testing.
3. Inception of an intricate, though simple, process for obtaining absolutely uniform pins and couplings mechanically.
4. Greatly refined process of adhering to perfect tolerance limitations.

We are manufacturing both A. P. I. and Standard Axelson Sucker Rods

No matter how durable your old Rods, the present Axelson Rods will give many months of added service. ..... Performance tells the story.

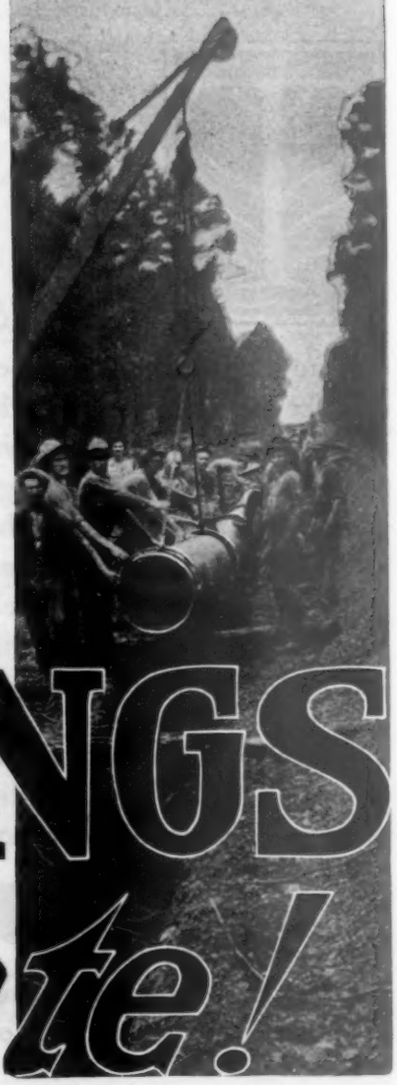
Axelson Machine Co.

P.O. Box 337, Los Angeles
Tulsa, St. Louis, New York City
Mid-Continent Distributors ... Frick-Reid Supply Co.
Eastern Distributors ... Frick & Lindsay Co.

DRESSER

DURABLE RESILIENT ECONOMICAL SIMPLE SAFE EFFICIENT RELIABLE

A Combination of Essential Factors for Satisfactory Service



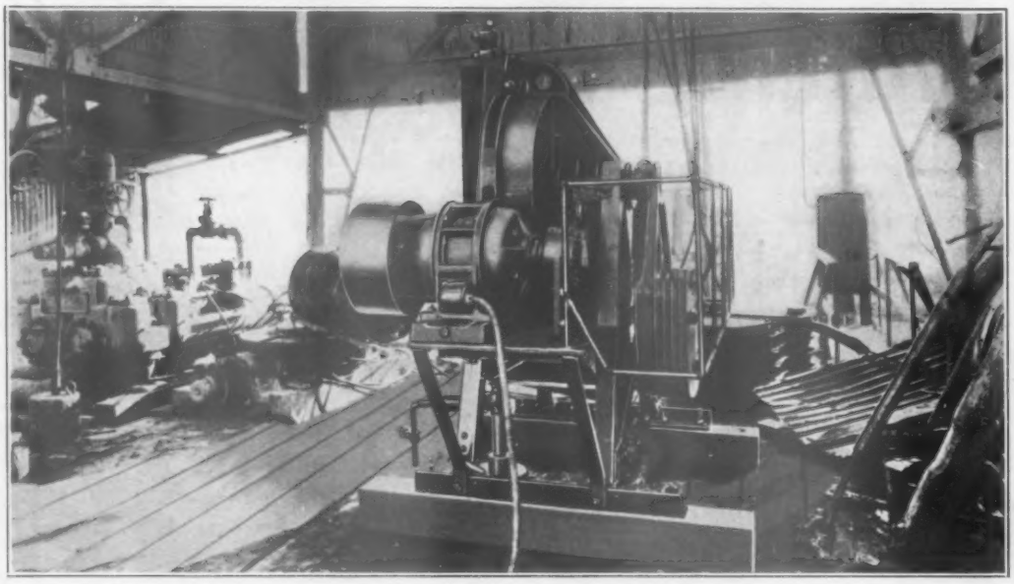
COUPLINGS *Dominate!*

Say you saw it in The OIL WEEKLY

Nothing is apt to cost so much as a bearing that cost so little

Another manufacturer of oil field equipment that uses SKF Bearings

EMSCO DERRICK & EQUIPMENT CO.



Trouble-Free 24-Hour Service Calls For The Highest Priced Bearing in the World

CONCENTRATED loads and 24-hour continuous service make necessary the use of the best bearings money can buy for oil field service. It is for these reasons that twelve SKF Anti-Friction Bearings are used on each Emsco Pump Jack. There are now more than 100 of these jacks in the fields.

Ruggedness and long-life are outstanding features of SKF Bearings. They require *no adjustments of any kind* and always operate smoothly. The manufacturer of oil field equipment that uses SKF in preference to inferior or cheaper bearings gives the oil operator trouble-free service when he needs it most.

You men who plan, build, use or pay for machines of any kind, remember this: It costs more to replace a poor bearing than to buy the best one that SKF ever produced. And SKF Anti-Friction Bearings are the highest priced in the world.

2034

SKF INDUSTRIES, INCORPORATED, 40 East 34th Street, New York

SKF

Ball Bearings SKF Puts the Right Bearing in the Right Place Roller Bearings

Say you saw it in The OIL WEEKLY

MILLER COMBINATION BAILER AND SAND PUMP—SPEED WITH CERTAINTY

110 *of the Leading Producing Companies*

are using

MILLER

Combination Bailer & Sand Pumps

in Every Oil Producing State

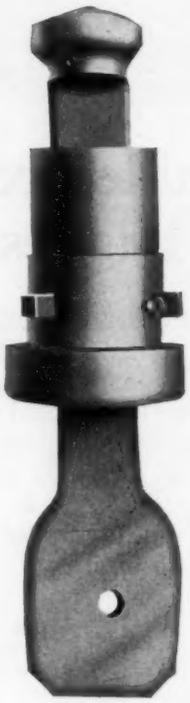
Chisel Bottom

Miller performance is *field proven.* Our unqualified guarantee of superiority has been amply backed by the experiences of the Companies using the Miller Combination Bailer and Sand Pump. Combined in one tool are both bailer and sand pump, giving you the advantage of savings in time and greater operating efficiency.

Sand line running through bail gives more clearance. The Plunger is made 18 inches long with eight water courses permitting the fluid to seal the valve on top of the plunger, thus creating a greater suction than in any other sand pump made.

Made in 3½", 4", 4¼", 5", 5½", 7" and 9" sizes with any length up to 30 feet. Furnished with either or all of the following bottoms: Sand Pump Bottom for cleaning out, Bailer Bottom for drilling and Chisel or Star Bottom (not illustrated) for cleaning out where tools are not used.

Send for circulars and price list. The Miller Combination Bailer & Sand Pump is sold through the leading supply stores or direct from the factory.



Bailer Bottom

Manufactured only by the

MILLER COMBINATION BAILER & PUMP COMPANY

SAPULPA, OKLAHOMA

MILLER

THE MILLER MAKES IT POSSIBLE TO USE A 30-FT. PUMP WITH SAND LINE RUNNING THROUGH BAIL AND CONNECTING WITH PLUNGER

Say you saw it in The OIL WEEKLY

BUDA

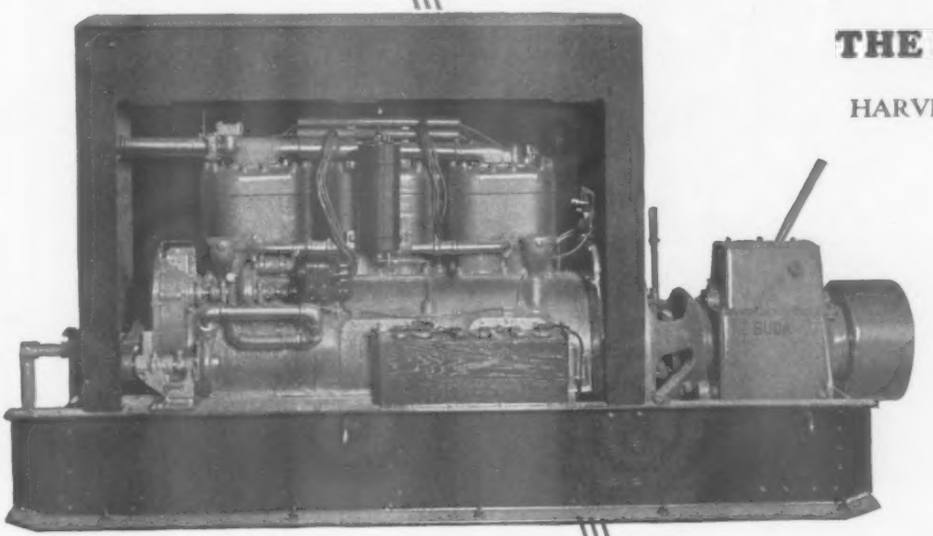
Drilling Engine and Reverse Clutch

—*for Cable or Rotary Drilling*—imparting to this work a *new* simplicity, ease, economy and absolute dependability. The BUDA outfit has two outstanding advantages: (1)—it will do work that cannot be done with the ordinary gas or gasoline drilling rig. (2)—as compared to steam driven outfits, it will do more work, faster and cost far less to operate.

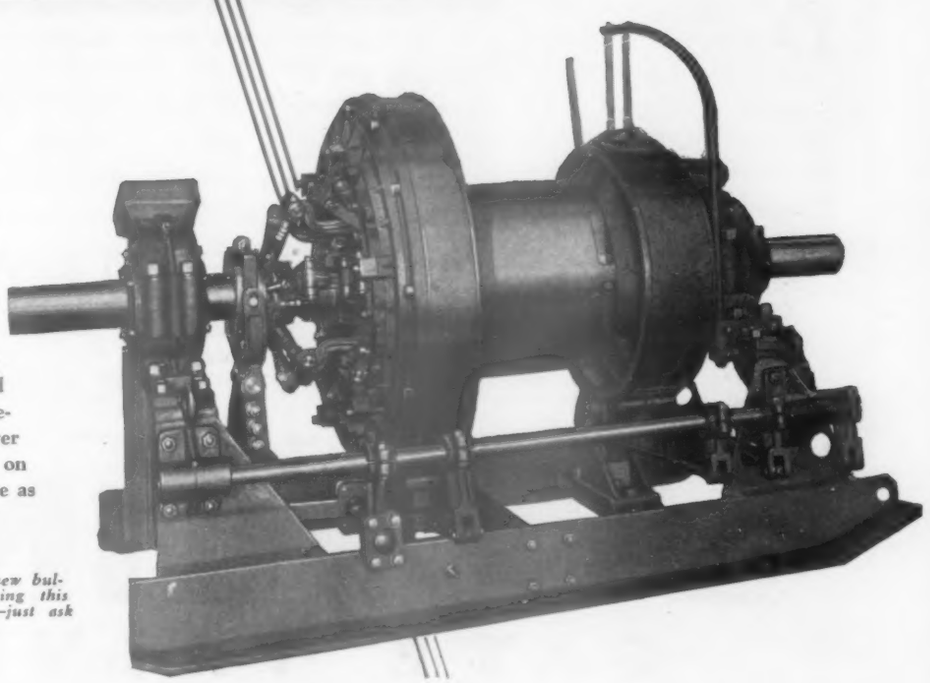
The engine is equipped with a "two-speed" transmission which provides extra leverage—an easy and gradual pick-up of very heavy loads and a regulation of the band-wheel speed. This feature is not found on any other drilling engine of equal capacity or size.

Both engine and clutch units are portable—a 2½ ton truck will handle them easily—low cost of transportation and quick movement.

The BUDA units are obtainable in many different combinations up to 150 H. P. Operates on either Gas or Gasoline. Engine illustrated is the BUDA JH-6, 150 H. P. and is furnished complete with all necessary accessories and equipment.



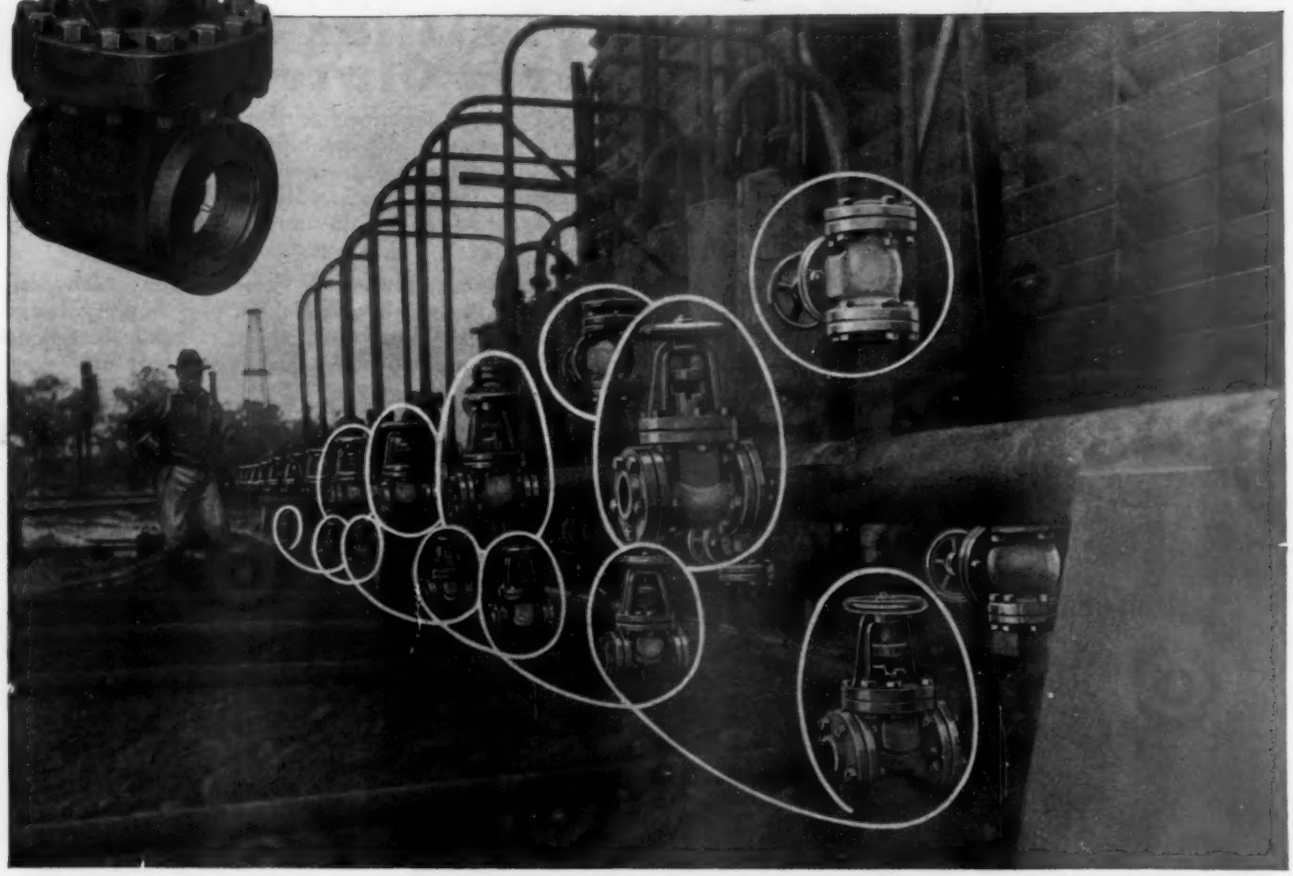
THE BUDA COMPANY
Established 1881
HARVEY (Suburb of Chicago), ILL.
TULSA, OKLA.
311 E. Second Street
SAN FRANCISCO
664 Mission Street



The BUDA Reverse Clutch is simple to operate—*no new method to learn.* The clutch is fitted with a neutral brake shoe, this in combination with the forward clutch and reverse band being operated by one lever provides the link motion on the derrick floor the same as steam engine control.

We have just issued a new bulletin completely describing this unit and its hook-up—just ask for Bulletin 643.

Army of "DARLINGS" in Air Lift Service



DARLING VALVES were among the first recruits drafted for Air Lift Service when that method of operating was introduced. Today it is but natural for operators to call upon these veterans who have seen service under other severe conditions.

Hundreds and Hundreds of Darling Valves are installed in air stations in the field. They are demonstrating, beyond a shadow of doubt, their ability to withstand high working pressures as well as high starting pressure.

Before you specify any valve equipment, look into the mechanical refinements of Darling Valves.

DARLING VALVE & MANUFACTURING COMPANY

WILLIAMSPORT, PA.

NEW YORK CHICAGO OKLAHOMA CITY HOUSTON

Mid-Continent Distributors:

Frick-Reid Supply Co.
International Supply Co.
Atlas Supply Co.
Petroleum Supply Co.

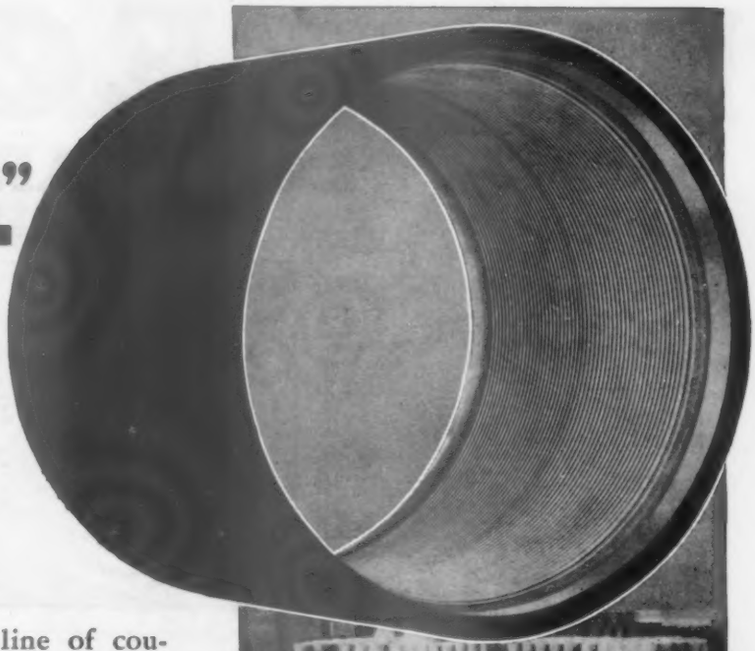
California Distributor:
Petroleum Equipment Company, Los Angeles

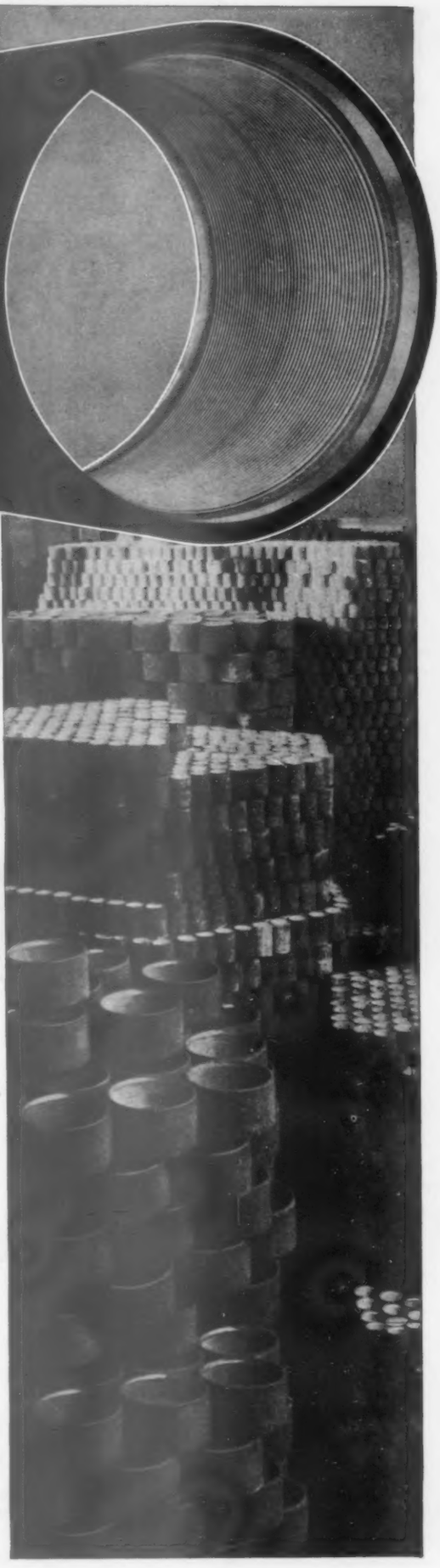
DARLING

GATE VALVES

Say you saw it in The OIL WEEKLY

"NATIONAL" *seamless steel couplings*





The "NATIONAL" line of couplings is designed to care for all your coupling requirements whatever size or type you may need.

First, you are sure of uniformity in material and finished dimensions. Second, you are sure of one and the same high quality in performance on the job. Third, you are sure of a prompt and continuous supply from one source no matter how extensive or varied your requirements.

Every "NATIONAL" Coupling is made under the same ideal conditions—one organization controlling every operation from raw materials to finishing room. Special patented equipment is used for taper tapping; highly perfected threading practice insures ideal threads; improved electro-galvanizing methods prevent galling; a special high grade steel resists deformation and abrasive action; critical inspection after each operation insures a high degree of accuracy in all work performed.

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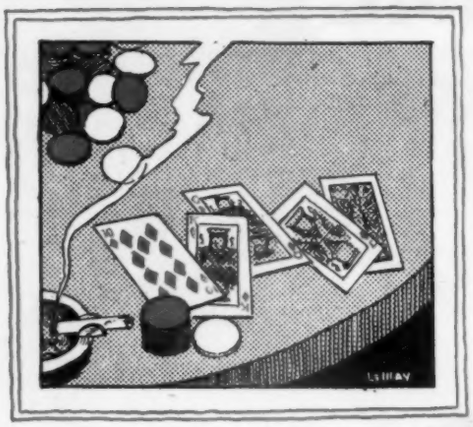
CORE BARREL



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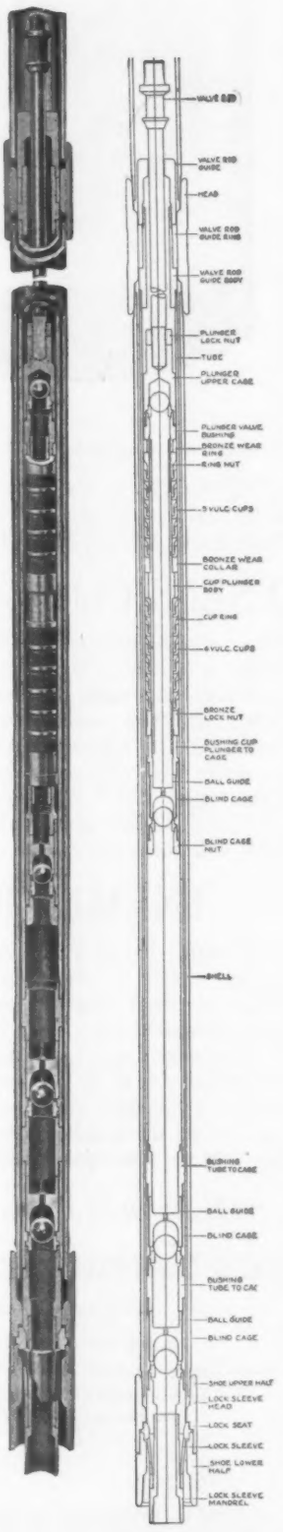

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for longer-lived lines

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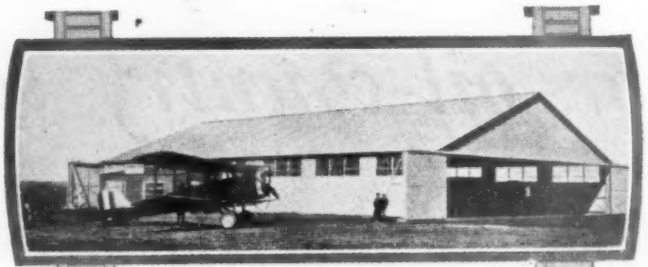

A galvanized iron hangar painted with Tnemec Paint.

Applying Tnemec Floor Paint in a Mid-Continent plant of a leading refining company.

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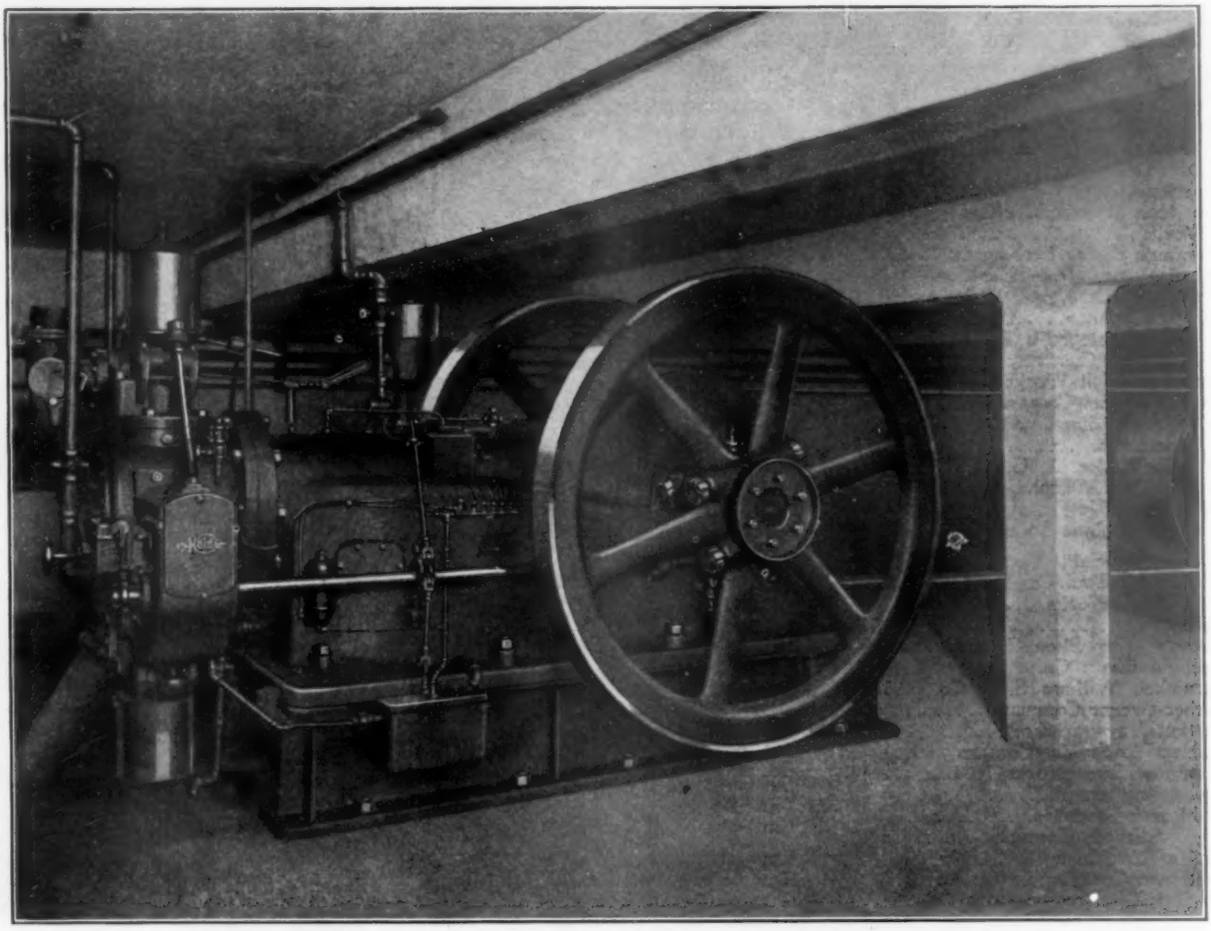

View of Reid Four Cycle Gas Engine Commercial Installation where the power requirement is close to 100 HP.

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GAS ENGINES — OIL ENGINES — PUMPING POWERS
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May 4, 1928 Volume 49, No. 7

The OIL WEEKLY

Edited Weekly at Houston, Texas SPENCER W. ROBINSON, Editor

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IDECO Galvanized Steel *defies the Penetrating Moisture of the Tropics*

The photo shows an IDECO standardized steel warehouse being erected by native labor in Trinidad near the San Francique and Fyzabad oil fields. Due to the simplicity of construction and elimination of all unnecessary parts erection of IDECO buildings was very easy and the native laborers had no difficulty in erecting this building in record time.

Standard Steel Buildings in Trinidad

HEAVY humidity, penetrating moisture and destructive ants are mighty forces to contend with, but IDECO buildings have come through unscathed.

In this country IDECO buildings are equally successful in combating the corrosive action of salt sea air as well as acid atmosphere surrounding factories and railroads. After years of service you will find that the bolts, nuts and sections will come apart easily, with no sign of rust eating away the strength of the members.

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Crude Advance Would Help Preserve Refiners' Market

Cheap oil available to operators tends to encourage refining of more gasoline than market can consume; all products advanced since last crude change

By KENT RIDLEY

AGAIN of 18,000 barrels in the Hendrick pool sent the daily average for the last week of April up another 10,000 barrels to within a few barrels of the peak for the year. Another important gain was 12,000 barrels recorded for Long Beach, the California increase being reduced to 8,500 barrels by decreases in other fields. The situation in Texas is to be modified by the pending shut-in of Hendrick wells which is now scheduled for next week, but in California the raise is after inauguration of a program of curtailment which has closed in much oil.

The market situation generally is strong. All refined products are in good demand, with gasoline particularly strong. This situation continues talk of a pending increase in the posted price in the Mid-Continent. But in California the threatened continued increase at Long Beach tends to dispel any prospect for increase in prices at this time.

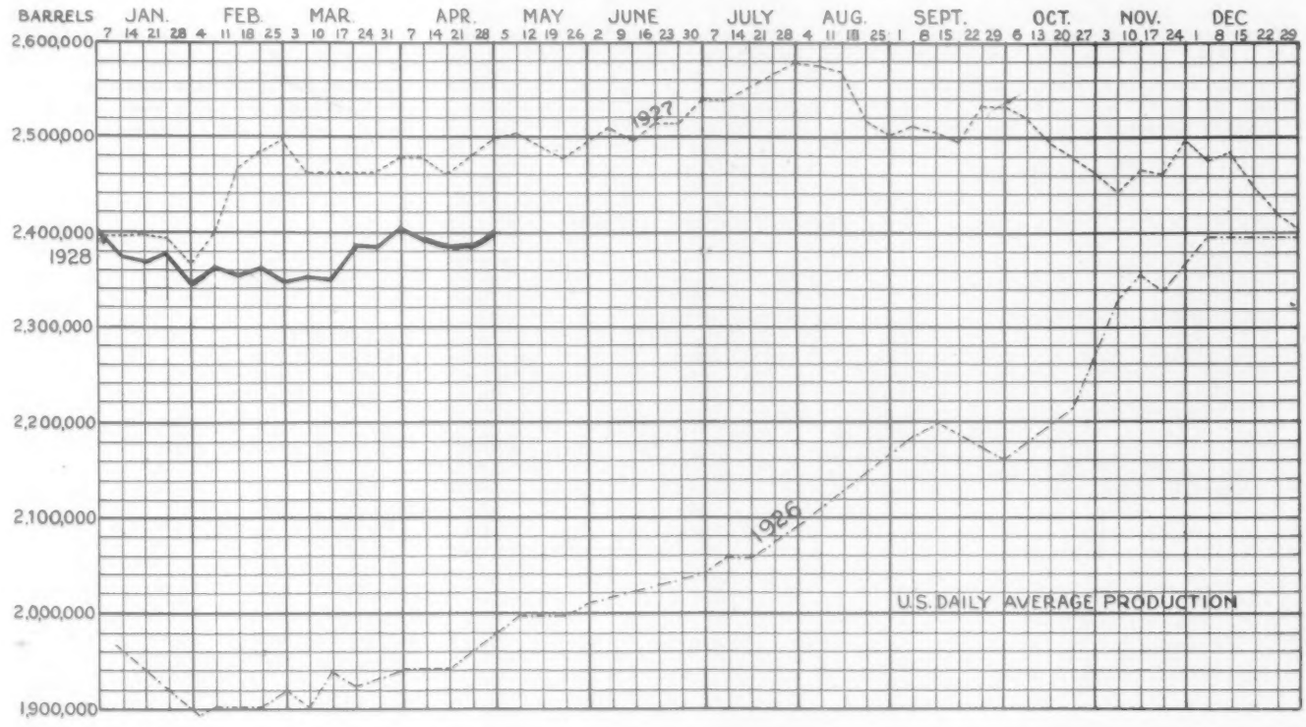
Further progress towards a prompt increase in price quotations on the high gravity crudes was in evidence in the North Texas district early this week, when U. S. Motor gasoline advanced to seven cents per gallon. North Texas refiners have succeeded in adding a full cent per gallon on the price of the latter grade of gasoline since the last crude price change in February, and as a result of this favorable turn of the market structure the daily crude runs to stills have been materially increased lately, with a corresponding increase in the demand for crude in the district. Refiners' quotations on fuel oil, kerosene and other products have registered a slight advance, or held their own in price since the last crude price change, thus placing the plant owners in a healthy economic condition.

The margin now enjoyed by the independent refiner in the Mid-Continent district is having a tendency to induce owners of idle plants to resume operations, as well as to encourage greater production in the active ones. An adequate crude supply is available for most of the centrally located plants, especially in the North Texas district, where Prairie Oil and Gas Company is offering to take care of the crude requirements of the responsible plant operators at a flat marketing charge of 10 cents per barrel above the posted price and usual pipe line delivery charge.

The recent upward trend of gasoline prices is lending direct support to a Mid-Continent crude price boost, while the aggressiveness of plant owners in taking on more crude is a contributing factor towards competition for connections bringing about the upward revision of crude prices.

Excessive refinery operations at this early stage of the summer gasoline consumption period carries a threat to the price structure on gasoline, but if one or more price boosts on high gravity crudes are posted shortly the plant owners will sustain a reduction in their margin of profit that will serve to curb plant operations until a corresponding

UNITED STATES CRUDE PRODUCTION TREND



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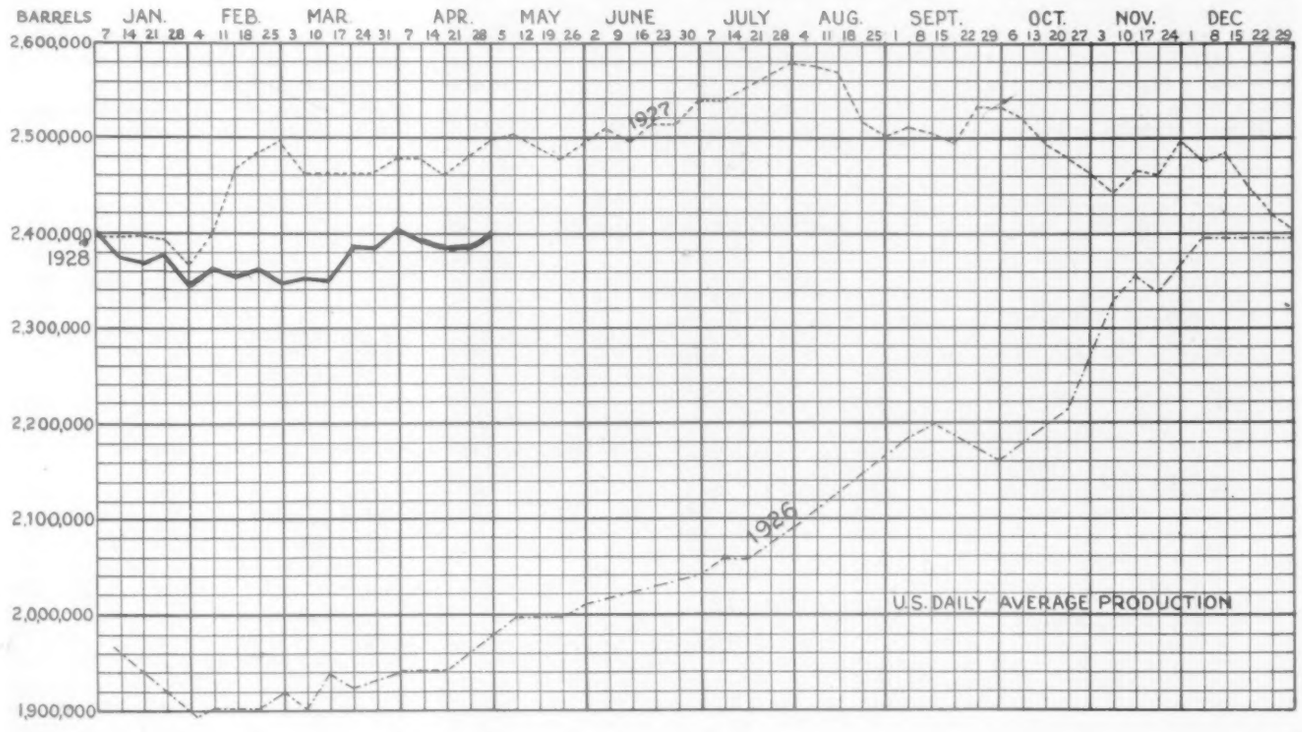


increase in prices on refined products can be realized.

Numerous skimming plants being thrown together as fast as materials can be shipped in from dismantled plants in other sections of the Mid-Continent, with a few equipped with new material, are soon to place the West Texas district in an important refined oil market position. These plants are being erected primarily to make a quick turnover while an over production of crude exists, and most plants are protected over the balance of the year with crude supply at a low flat price. The crude price advantage obtained by these West Texas plants offsets the freight rate difference in reaching out to distant points and competing with Mid-Continent district plants that operate on much higher priced crude. Local markets can not absorb the output of the plants, and shipments must be made to distant points.

West Texas Crude Stronger

The crude price structure in the West Texas district is beginning to assume a stronger tone since the Texas Railroad Commission ordered the Hendrick flush area held in check in the interest of conservation, while the curbing of all production in the deep lime horizons in the Roberts pool, located on the Howard-Glasscock County line was also placed under the official supervision of the Commission April 28. The Yates shallow field has been operated under rigid restrictions since the establishment of the field as a major source of production, and will continue under a proration plan indefinitely, with prospects of the commission taking over the proration plan when the present term of restriction expires at the close of June.

Unless the Texas Railroad Commission is stripped of its authority to curb overproduction it is now generally believed that future field developments in West Texas flush areas will be on a sane basis, and excessive overproduction with a corresponding period of low crude prices will be a thing of the past.

Refined products in the Mid-Continent continue to show gaining strength. For the first time this year buyers were the aggressors last week, and seven cents per gallon was being freely offered for U. S. Motor grade for delivery during the first half of May. One purchase was reported late last week of 5,000,000 gallons of U. S. Motor gasoline for export. The big volume of the growing business is in the export line, and prices such as the following were being paid for gasoline for export: Seven and one-half cents for 64-66 gravity, 375 end point, and seven and one-quarter cents for 61-63 gravity, 390 end point.

Domestic sales lagged during the past week as a result of inclement weather three days, but good weather beginning Saturday promises retail sales for the coming week to set a new record for the year in Oklahoma.

Kerosene in the Mid-Continent is also gaining considerable strength, with 41-43 gravity going fast at five to five and one-quarter cents. Natural gasoline is in big demand, with Grade "C" bringing 5¼ cents, Grade "BB" bringing 5½ cents and "A" and "AA" grades going at from six to six and one-quarter cents.

Premiums Paid

A few premiums are being paid for certain Oklahoma and Kansas sweet oils, but little talk of increases is heard. However, the increase of 8000 barrels in daily average in the Seminole district last week fails to weaken chances for a raise in crude because of the well handled situation among operators. Wells ranging in size from 3000 to 5500 barrels being pinched in to 50 barrels after a three-day test flow shows the desire of Mid-Continent producers to revive prices to a normal profit basis, and this method of handling big production is in force over the two States with a limit mentioned only when a strong market warrants.

Pipe line runs of crude out of Greater Seminole last week averaged roughly 260,000 barrels, while three companies which are using tank cars for shipping, are moving out nearly 14,000 barrels daily, leaving only a bare margin between transported and produced oil.

The continued gain in production in the Long Beach field apparently has eliminated for the present the possibility of an increase in California crude oil prices. Despite the reduction in the heavy oil output, State production is climbing gradually. Long Beach seems headed for the 200,000-barrel mark and this figure may even be exceeded for many thousand barrels. At any rate, the supply of oil is sufficient for all present needs and no price adjustment seems necessary at this time.

The recent increase in gasoline stocks was caused by the refusal of many refiners to sell export grades at prevailing prices and the natural gain usually recorded at this time of the year. Natural gasoline has been fairly plentiful, due to the large gas production in the Long Beach field. Local gasoline consumption is expected to break all records during 1928.

Fuel Moving Slowly

Fuel oil is moving slowly, but refiners are optimistic concerning the future of the commodity. With the curtailment of heavy oil production, an improvement is in sight and present stocks probably will not be reduced at a figure below prevailing prices. The consumption during the spring and summer months is always much smaller than during the winter season, and for this reason any improvement will be reflected slowly.

The new fields in California are not expected to be important market factors for some time. Rincon and Potrero offer possibilities, but may never become critical areas. The former has made a disappointing showing, and the latter is too closely held to provide an upset.

J. Burr Gibbons, general manager for the Petroleum Exposition, was a visitor at the scouts convention held in Guthrie April 28-29, and in a talk to the association members told of the purpose of the oil show, now an annual affair. Mr. Gibbons has many friends among the Mid-Continent scouts. His talk was followed by a unanimous vote of the scouts for the association to officially indorse the exposition.

Details on Critical Fields

	Oil wells completed	Total initial production	Initial per well	Number producing wells	Daily production barrels	Daily production per well	Rigs up	Wells Drilling
WEST TEXAS—								
Hendrick	135	512,895	3,799	151	216,630	1,435*	29	116
Church & Fields	181	201,110	1,111	180	46,600	259*	1	..
Gulf - McElroy	60	52,050	867	60	15,815	264	1	1
Yates	193	1,265,010	6,554	188	52,300	278*	5	11
Totals	569	2,031,065	3,596	579	331,375	572	36	128
TEXAS PANHANDLE—								
Hutchinson County	1,097	544,720	497	965	41,565	43	6	24
Gray County	221	98,155	444	204	19,440	95	9	46
Carson County	177	58,695	332	156	7,420	48	2	6
Wheeler County	42	14,230	339	35	1,005	29	5	9
Totals	1,537	715,800	466	1,360	69,380	51	22	85
OKLAHOMA—								
Seminole	1,297	1,579,444	1,217	1,087	280,362	257	10	61

(*) Production partially pinched.

Hendrick "Umpire" Arranging Details Of Proration Order

Cranfill & Reynolds enter protest on section of official rules and advisory committee has recommended abrogation

By H. H. KING
Staff Representative

FORT WORTH, TEXAS.—Production restrictions ordered last week by The Texas Railroad Commission to be applied to the Hendrick field, West Texas district, may be partially in effect early next week, as Harold N. Pardee, Cisco operator, who was selected to serve as umpire, has set up a temporary office in the field and started assembling the necessary data to prorate the daily output on a basis of producing acreage and potential production. A field conference of the advisory committee and the umpire was to be held Tuesday to decide on a method for determining the potential production of each individual well, and also to gain first hand information as to existing conditions in the field.

The selection of Pardee as umpire was made Wednesday by the advisory committee, which consists of four representatives of independent concerns and operators and three major oil company officials. J. D. Collett, Fort Worth operator, is chairman of this committee, which is charged with the administration of the rules issued by the commission. The approval of Pardee as umpire has been made by the commission, and in the future he will act as the latter's agent in the field, having been placed on the State's payroll as a deputy supervisor of the oil and gas division. The expenses incurred by the umpire in maintaining a field staff, cars, etc., will be borne by the oil producers in the field, and funds to defray such expense were raised at a meeting of operators April 21.

The major task confronting the umpire and advisory committee in launching the proration order, calling for the restriction of production to 150,000 barrels daily until further notice, is the fixing of the potential production of each well. Tentative plans are to flow the wells open for one hour under an accurate gauge to use as a basis of determining the estimated daily flow. Some of the owners of unusually large wells on the north end of the field have voiced disapproval of opening their wells to the maximum flow, owing to the hazard of bottom hole water, while a number of the leases are not adequately equipped with pipe lines and tankage to permit the opening of all wells during a brief period, even though wells should be gauged separately. Approximately 125 of the 151 producing wells in the field will have to be given the open flow tests, while the balance are settled to a small daily yield.

The limitation of the Hendrick field to an output of 150,000 barrels daily is not believed to be a maximum figure, and an upward revision has been promised by the commission after the plan becomes effective and operators

UMPIRE FOR THE HENDRICK FIELD

HAROLD N. PARDEE

Qualifications of Harold N. Pardee, Cisco, Texas, operator, for umpire in the Hendrick field includes about 15 years of active work in the Central West and North Texas fields. Pardee is a native of Butler, Pennsylvania, and came to Texas in 1913 to join the field forces of The Texas Company. He later became field superintendent for the Humble Oil & Refining Company in the Breckenridge district, which was followed by a promotion to production manager of the Cisco division. In 1925 Pardee resigned from Humble to become general manager in charge of production for the Landreth Production Corporation, and held the latter position until the Wilbarger County properties of the Landreth Production Corporation were sold to Phillips Petroleum Company in April, 1926. Pardee has since been active as an independent operator in the Cisco shallow belt.

show evidence of being able to conserve gas pressure on the field at a higher daily yield.

Although the commission's rule forbids the shooting of wells without special permits, and also places a ban on the use of air lift, an effort is to be made in the near future by the operators in the south and central part of the field to waive the latter rule, since water encroachment is rapidly drowning out the oil flow on the older wells. The introduction of the air lift to leases that have developed a high percentage of water will result in the recovery of oil that would otherwise be sealed off by coning. Air lift experiments in the field register a 50 per cent increase in oil production per barrel of fluid produced as compared to swabbing and pumping.

Objections to paragraph two of the eight separate rules in the commission's official proration order, which was published in detail in these columns last week, have been registered by Cranfill & Reynolds, Inc., and others, and the advisory committee has recommended that the rule be stricken from the order. However, the commission has deferred any action. Rule 2 requires that each purchaser of crude nominate to the commission the daily quantity of oil to be bought for current transportation from the field for the remainder of the calendar month, and on or before the first and fifteenth of each calendar month thereafter.

Until a potential production gauge is taken on individual leases in the field, no data will be available as to how each producer will fare under the proration order, although it is known that those with small leases and only normal sized producers will be heavily penalized. The producing area will be divided into 40-acre units, giving 16 units to each section, and the volume of proven acreage will determine one-half of the earned daily outlet, while potential production will fix the other 50 per cent. Producers with less than 40-acre units must share the allotted pipe line outlet for the entire unit with those holding the remaining parts of the unit. This method works to a disadvantage to Cranfill & Reynolds, Inc., since their five completed oil wells are scattered over two 20-acre and one five acre tracts, thus requiring a split on three units.

Gulf Production Company is the only producer in the field at present that has no pipe line facilities, or connections with outside lines, and is storing all oil produced. Several other lease owners without a pipe line connection in sight will enter into production shortly, and it is understood that Humble will make an effort to prorate some of its idle pipe line capacity among the latter group in the event Humble's leases fail to earn the daily production now being obtained. Humble's line is capable of handling 70,000 barrels daily, and its actual production has been averaging about 34,000 daily for some weeks.

Howard Shut-In Agreement Given Official Sanction

FORT WORTH, TEXAS.—Continuation of the present practice of shutting in all oil wells completed from the deep lime horizons in the Roberts-Settles pool, located on the Howard-Glasscock County line, West Texas district, was approved at a hearing held here April 28 by the Texas Railroad Commission. The operators elected an advisory committee of five to aid the commission, which has officially assumed the responsibility of holding back this potential flush oil producing area until over-production is relieved in other fields in West Texas, in preparing a set of rules to be applied to the field.

The commission's action in assuming the responsibility of holding back production from the deep horizons in the Roberts-Settles pool was prompted by requests of several of the largest lease owners in the proven area, and little opposition was registered at the hearing Saturday. Every deep well in the field is now shut in for the reason that there is not a market for the oil, and the two concerns with pipe line outlets do not elect to produce their oil, which would force offset lease owners to erect large tank farms, or build pipe lines to distant railroad shipping points. Except for the deep lime discovery well, which was brought in October 24, 1927, and produced about 225,000 barrels of oil before a second completion in the pay was scored, the 10 deep wells have not been allowed to produce after arriving at the initial production, and some of the wells have not been tested for production.

Robert T. Piner, banker of Big Springs and representative of the Dora Roberts estate, which is the largest royalty owner in the pool, was elected to serve as chairman of the committee of five operators. The other members follow: Frank T. Pickrell, vice-president, Texon Oil & Land Company, Big Lake; George C. Matson, vice-president, Schermerhorn Oil Company, Tulsa; William Flemming, president, F-H-E Oil Company, Sherman, and I. G. Harmon, vice-president, Marland Oil Company of Texas, Ponca City, Oklahoma.

R. D. Parker, chief supervisor of the oil and gas division of the Texas Railroad Commission, presided at the hearing, and informed the operators that the commission does not desire to be forced to make an aggressive move, but through prompt action an acute situation can be avoided in the pool. Parker suggested that new drilling be restricted to necessary offsets, and that tests now drilling be shut in upon completion as is the case with present producers.

A. S. Hardwicke, assistant general counsel for Magnolia Petroleum Company, Dallas, informed the commission and operators that the shutting in of Magnolia's wells was not a part of an agreement, but was a voluntary move, and that all deep wells would remain shut in voluntarily as long as offset drainage was not incurred by other operators. Hardwicke voiced disapproval of the commission issuing an order to hold back production in this particular area, but if a rule was put into effect Magnolia would abide by same. J. W. Timmins, counsel for the Sun Oil Company, Dallas, recommended that the present plan of shutting in wells upon completion be continued, and not bind the operators with a commission order.

Walter M. Priddy, Wichita Falls, former president of the American Refining Company, announced that he was representing interests that plan to build a six-inch pipe line into the field from a distant refinery site and railroad point, and provide a market outlet for five to 15 thousand barrels daily, but would not enter the field as a purchaser of crude unless the operators desired to open up their wells and prorate the production. The market outlet promised by Priddy was not given consideration, but the announcement of such plans caused the group of operators favoring the commission ordering a complete shut-in rule for the deep pay to make a stronger plea for prompt action.

Frank Pickrell pointed out that the entrance of crude buyers with lines into the field offer the greatest threat for an over-production and heavy drilling campaign, and asked that the lease owners look ahead and avoid such conditions. I. G. Harmon predicted that the deep horizons would yield 22,000 barrels daily, if present wells should be opened up, while production would increase to 38,000 barrels daily in June from wells now drilling. There are now as many tests drilling to the deep horizons as there are producing wells. Mr. Thompson of the Schermerhorn Oil Company, Ardmore, suggested that the present shut-in arrangement remain in effect for 60 days, and when pipe line outlets are made available to prorate on an equitable basis, using 40 or 80-acre units so as to relieve the operators from heavy drilling programs.

Warner Clark, general manager for The California Company and a member of the executive committee of the Yates field proration plan, recommended that in the event production is opened up on a proration basis that the combination producing acreage and potential production plan be adopted in fixing pipe line quotas of each lease. The Yates field operators tried the potential production plan first, and found that it led to heavy drilling campaigns, while the proven acreage plan is unfair to operators holding big wells. Clark intimated that the Yates field operators will shift to the combination plan of taking producing acreage and potential production in arriving at pipe line quotas after July 1, when the present method expires. The latter plan will be carried out in the Hendrick field beginning May 5.

Hendrick Wells Showing Water in Increasing Quantity

Operators in north end of field favor applying more back pressure to halt spread; will immediately effect production

By H. H. KING
Staff Representative

San Angelo, Texas.—Appearance of water in one of the large producers on the north end of the Hendrick field Monday of this week made it necessary to shut in the well until treating facilities can be provided, and owners of other nearby wells are now in favor of applying more back pressure to producers because of the spread of water troubles being an almost certainty.

This water encroachment will cause a reduction in daily output of the field promptly, as the porous lime formation permits rapid spread of water when wells are flowed at an excessive rate, and drainage has been particularly heavy on the north end owing to operators making a race for the flush production. Water entrusion is a natural condition that now exists in all parts of the field, and does not discourage new drilling since its spread can be retarded somewhat by the choking of wells and the natural flow continues. The cut oil treats readily under common methods in this field.

Cranfill and Reynold's Hendrick 2 "C" extended the water zone one and one-half miles and to the north end of the Hendrick field while flowing under back pressure at the rate of 5000 barrels daily, and was showing in excess of five per cent cut oil early this week when ordered shut in pending the erection of a treating plant. This well is an east offset to the same concern's unusually prolific well, which opened up the north end March 1. The well making cut oil was completed April 15th, flowing about 500 barrels per hour with 600 pounds back pressure when only two feet in the big pay at a total depth of 2762 feet. Heavy gas production was lacking in this well, and the owners elected to take the most oil from their other well because of anticipating water.

Some question has arisen as to the source of the water on the Cranfill and Reynolds' lease, since eight-inch casing was cemented at 2356 feet and possibly on a shell above the main lime body. Skelly's Hendrick 1, located two locations east and one location south, has been making a large volume of water at 2314 feet, and may be a source of supply for the Cranfill and Reynolds well. However, Atlantic and Collett-O'Keefe's Hendrick 4 "F", a west offset to Skelly's water well, was brought in Sunday making 2000 barrels daily flowing wide open, without showing water.

Cranfill and Reynolds' 20-acre "C" lease has been one of the most prolific in the field, having produced in excess of three-quarters of a million barrels of oil since March 1. Magnolia has received approximately 700,000 barrels from this lease in accordance with its 3,000,000-barrel crude storage contract, and the remainder has been run and purchased by the American Petroleum Company on contract. An average of more than 21,000 barrels daily was maintained last week from the two wells. Cranfill and Reynolds' other three wells in the southern part of the field have been hard hit by water, and Hendrick 1 "A" is entirely dead.

Southern Crude and R. A. Westbrook's Hendrick 1 "K", located in the northeast corner of Section 41, brought the total number of wells on the north end of the field to nine after drilling to a total depth of 2870 feet with an initial flow of 4100 barrels daily. This well is partially pinched, and is the deepest in the area. Gulf Production Company's Hendrick 13, located in Section 40 and on the east flank of production, flowed 335 barrels per hour with six per cent water at 3014 feet. This well is estimated good for 500 barrels per hour, but water will not permit such a high flow.

Gibson-Johnson et al's wildcat test on the Lum Daugherty ranch, located about nine miles northwest on the Hendrick field, gauged 28 million cubic feet of dry gas with 1300 pounds rock pressure at 3070 feet, and will attempt to mud off to deepen. This wildcat is being watched with great interest, but is not considered to be on the same structure as the Hendrick field, since the latter is already showing signs of breaking off to the north by lime tops registered from outpost tests drilling in Section 33.

Magnolia Buys Tanks

Dallas, Texas.—Magnolia Pipe Line Company has ordered four new 55,000-barrel steel tanks for immediate erection at its Maud station tank farm, Seminole district, Oklahoma, owing to current crude production and purchases of the Magnolia Petroleum Company in Oklahoma and Kansas continuing to average about 4000 barrels daily above actual pipe line outlet.

HENDRICK FIELD OPERATIONS

The status of operations in the Hendrick field, Winkler County, Texas, at the close of last week is shown below by companies:

Company	Locations and Rigs	Drilling Tests	Tests in Big Lime	Completed Wells	Initial Produc'n	Daily Average Produc'n
Amerada Petroleum Corp.	..	..	1	..	.....	.....
Arizona Mining & Eng. Co.	..	1	..	..	.....	.....
Atlantic Oil Prod. Co.	1	6	5	12	50,350	*13,565
Atlantic & Collett-O'Keefe	2	3	1	2	25,000	*7,410
V. T. Bolin & Co. et al	..	1	..	..	.....	.....
The California Company	..	..	2	6	6,900	5,005
Cranfill & Reynolds, Inc.	1	1	..	4	41,825	*23,085
Eastland Oil Company	..	..	1	..	.....	10
Gulf Production Company	2	3	5	8	30,615	17,580
Humble Oil & Refining Co.	6	7	3	14	58,720	*34,735
Independent O. & G. Co.	1	1	2	14	60,720	*12,005
Landreth Prod. & Roxana	3	6	2	6	26,925	10,850
Magnolia Petroleum Co.	..	..	3	5	11,790	2,975
Marland Oil Company	2	3	2	..	.....	.....
Murchison & Cranfill Bros.	3	..	2	5	6,675	810
Prairie Oil & Gas Co.	1	1	..	..	.....	.....
Pure Oil Company	3	3	11	8	23,895	*5,560
Republic Production Co.	2	4	3	3	15,700	4,555
Roxana Petroleum Corp.	3	2	5	16	85,530	*37,135
Sheldon-Burden et al	..	..	1	..	.....	.....
Skelly Oil Company	5	1	..	..	.....	.....
Southern Crude-Dixie Oil	2	1	6	15	35,565	*21,040
Southern-R. A. Westbrook	12	6	8	13	20,650	*12,610
Texon Oil & Land Company	1	1	1	4	16,175	7,700
Winkler Oil Producing Corp.	..	1	..	..	.....	.....
Totals	50	52	64	135	512,895	216,630
Totals previous week	46	41	68	127	484,040	217,310

*Indicates production partially pinched.

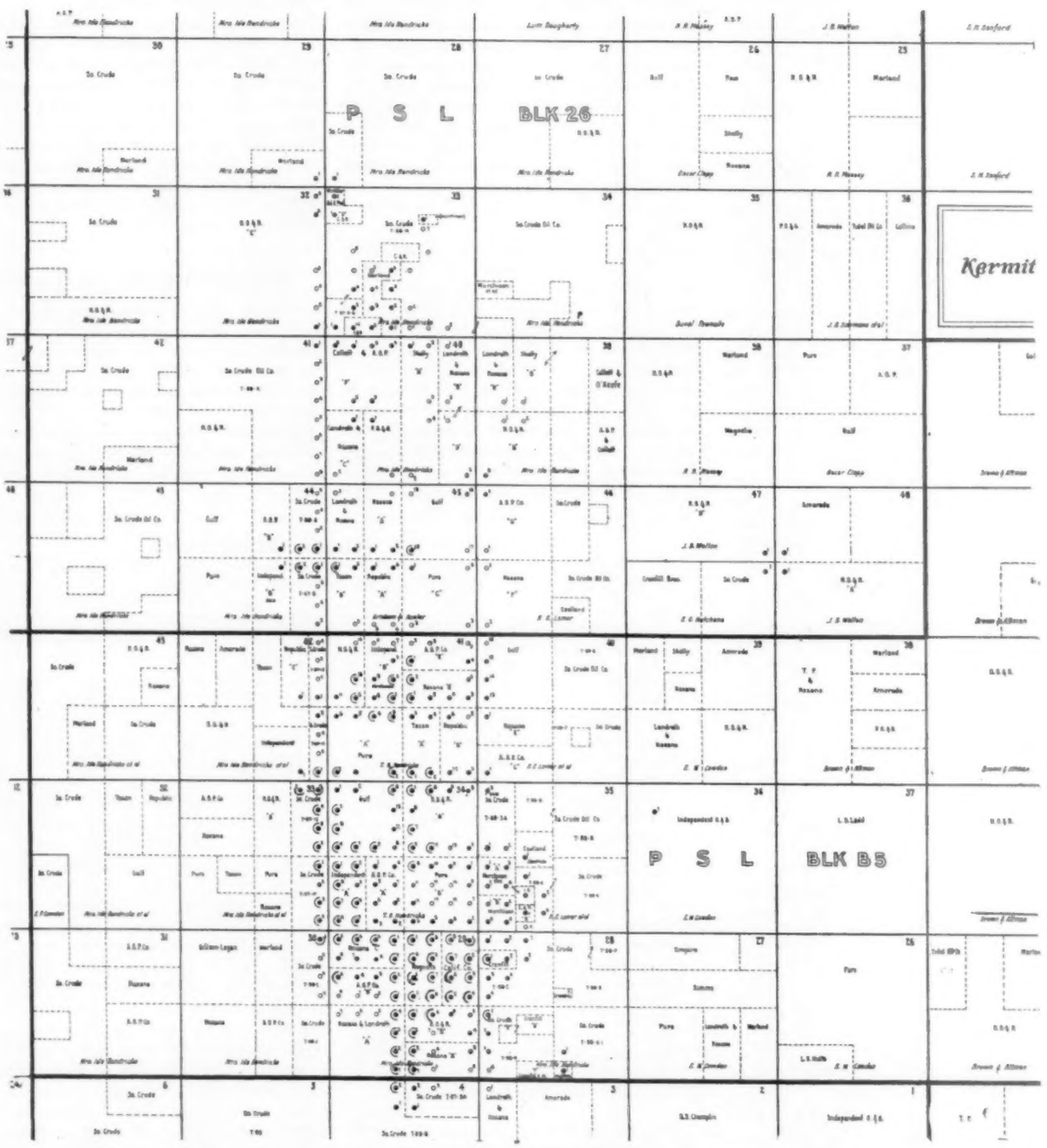
Increase in West Texas Line Capacity

Dallas, Texas.—The maximum daily capacity of the Magnolia Pipe Line Company's eight-inch trunk line extending from Crane County via Midland tank farm to De Leon station, where a connection is made with the Mid-Continent system, was stepped up to 25,000 barrels April 26 by the completion of the four new main line stations between Midland and De Leon. Magnolia has been pumping about 17,500 barrels daily from West Texas with the five original stations in operation, and the new stations make a total of nine on the 265-mile stretch.

This increased capacity will not affect Magnolia's tank building program in West Texas, since between 18,000 and 20,000 barrels of the daily pipe line capacity has been contracted for by Pure Oil Company and Atlantic Oil Producing Company. Magnolia is adding to its crude stocks in West Texas at the rate of about 30,000 barrels daily, owing to several unusually large crude contracts held with producers in the Hendrick and Church & Fields areas.

Sidney Powers, consulting geologist for the Amerada Petroleum Corporation, ill since January, has returned to his office in Tulsa. Mr. Powers recently underwent an operation in St. Louis, in which his spleen was removed.

WELLS IN THE HENDRICK FIELD SHOWING WATER



Map showing the completed oil wells and active operations in the Hendrick field, West Texas district, with wells making water indicated by a half circle.

Yates Prorated to 275 Barrels Per Well During May

FORT WORTH, TEXAS—The proration of pipe line outlet from the Yates field during May will afford each completed well approximately 275 barrels daily production, according to a revised table prepared by the Yates field proration committee at a regular meeting held here April 26. Only a few minor changes in the pipe line allotment were made by the committee as compared to the figures used in determining production by leases during April, and the business session turned to the discussion of plans of changing the method of prorating runs to that soon to be enforced in the Hendrick field after the present plan of determining pipe line outlet by volume of proven acreage expires July 1.

Much opposition has been registered lately by a group of lease owners in the Yates field against the present proration plan, owing to no credit being allowed producers fortified with big production. Recommendations were made by W. L. Todd, vice-president, Simms Oil Company, that the Yates committee adopt the Hendrick field plan, which calls for the division of the producing area into 40-acre units, and allot daily output on a basis of producing acreage and potential production. However, instead of using 40-acre units in the Yates field, it was suggested that either 80 or 160-acre units be used, since more than 200 new wells would have to be drilled promptly to earn the maximum production allowed in the Yates field under the Hendrick plan. This new drilling will be avoided, if possible, as most of the producers have sufficient production shut in to earn their quota on the larger unit basis. Warner Clark, general manager of The California Company, which is the second largest lease owner in the Yates field, voiced approval of the combination producing acreage and potential production plan, and a motion passed to have the necessary data compiled to determine approximately what effect it will have on the production of each operator.

Each producer in the Yates field will submit maps this week to J. Elmer Thomas, Fort Worth geologist engaged by the proration committee to aid in determining proven acreage area each month, showing the leases divided into three sizes of units, and also a report on the estimated potential production of each completed well. Thomas will compile the data to show how each producer would fare should the Hendrick field plan be applied to the Yates field, and a special meeting of all lease owners will be called about May 15 to vote on the matter, according to W. A. Moncrief, vice-president of Marland Oil Company and chairman of the Yates field executive committee.

The Yates field proration plan is functioning smoothly. A. T. Herd of New York City and associates, who recently purchased the Pecos River bed properties from Pandem and Gibson Oil Corporation, and the Grayburg Oil Company are the only two concerns not members of the plan. However, Grayburg has arranged to handle its own production through the joint use of the Illinois Pipe Line Company and its own line extending out from San Antonio, while Herd et al are selling their production on contract to J. D. McMahon, who in turn is delivering same to Sinclair Refining Company of Louisiana at 60 cents per barrel f. o. b. buyer's cars at Hurdle rack. These two non-members are somewhat isolated from the main part of the field, and will not produce any appreciable volume of oil daily, owing to the presence of a high percentage of water with the oil.

A comparison table of the percentage of pipe line capacity earned by each producing company in the Yates field for April and May, is shown in the accompanying table with the number of barrels daily production allotted for May. The daily pipe line outlet for the members of the proration plan will remain at 51,500 barrels.

Company—	April Percentage	May Percentage	Barrels Daily
Mid-Kansas-Transcontinental	35.05	33.60	17,304
The California Company	15.09	14.47	7,452
Gulf Production Company	12.68	12.16	6,262
Roxana Petroleum Corporation	9.18	8.80	4,532
Humble Oil & Refining Company	7.12	6.82	3,512
Marland-McMan Oil & Gas Company	8.00	7.67	3,950
Marland Oil Company	2.00	1.92	989
McMan Oil & Gas Company	1.00	6.00	3,090
Simms Oil Company	6.00	6.00	3,090
Red Bank Oil Company	1.00	1.00	515
Savoy-Mazda Oil Corporation	.60	.60	309
Kirby-Edson Petroleum Company	.60	.34	175
A. T. Herd et al	.76	...	...
Phillips Petroleum Company	.29	.19	100
Skelly Oil Company	.50	.30	153
Kirby Petroleum Company	.13	.13	67
	100.00	100.00	51,500

Water Trouble Here Is on Top of the Ground

Tulsa—One of the most difficult pieces of development in Northeastern Oklahoma is being carried on with unusual success by Glidden Oil Corporation, of Tulsa, in its Turkey Mountain production in the Arkansas River bed a mile west of Sand Springs, Tulsa County. The degree of success in operating here, where high water from the spring floods in Colorado and Western Kansas and Oklahoma, is exemplified by completion late in February of Rogers 3, in the northeast of the northwest of the northwest of the southwest of section 15-19-11, which had an initial flow naturally of 85 barrels an hour. Other successful measures taken by the operators is seen in the methods of producing the river bed wells during the high water season, beginning in April of each year.

Rogers 3, producing from 2115-22 feet with sand topped at 2106 and bottomed at 2145 feet, extends the old productive area 1000 feet north. Six old wells to the south cover an area of approximately 100 acres. Another location of Glidden & Holmes, the Curley-Page 1, was below 1855 feet at the close of February, drilling in the Mississippi lime.

Production from the big producer carries no water and tests 39.4 gravity. Pierce Petroleum Corporation, whose refinery at Sand Springs is taking the oil, laid a line to the river bank, 1500 feet from the well location, from which point it is taking production from a four-inch flow line from the well. The location of the Rogers well is on a sand bar, which splits the river flow at this point.

During each spring, when the Arkansas River rises, the sand bar is submerged, making it necessary for production equipment to be raised above the water level. This well will be pumped when the flow ceases by an engine and jack being mounted on a platform built around the location, while the casing will be raised to a safe distance above the surface of the stream. Due to the sandy foundation on which the drilling machine was set, 12 horses were required to move the boiler to the location.

In the face of the water hazards production is not hindered at any time during the year. The casing setting of the Rogers 3 was as follows: 28 feet of 12-inch, 500 feet of eight-inch, 1740 feet of six and five-eighths-inch and 2010 feet of five and three-sixteenths-inch. The well was completed and is flowing through the last string.

Scouts Reorganize Association At Guthrie Meeting

GUTHRIE, OKLA. — The oil scout used to trade the old driller a good cigar for a sample from the slush pit, and it was not uncommon for this sample to contain a few bread crumbs from the crew's dinner pail—just to make the sample a spicy one. Now those days are gone, and with them have gone haphazard methods and poor results of scouting. The scout's job is still one of swapping, but the swap is an even break, because he has something besides cigars to trade, and the driller has come to know him as one of the main joints in the backbone of the industry.

This was the keynote of an address delivered by Ralph W. Kirchner, of Bristow, Oklahoma, before a business session of the Mid-Continent Oil Scouts and Land Men's Association here April 28, the closing day of their two-day annual convention, the first meeting of the association following re-organization late last year after a short period of inactivity.

"In present day scouting the dope getter has as much valuable information to swap as the driller himself, and thus scouting has come to be an even break. The scout has the location to the foot, knows the well's elevation, and from his records obtained from land and geological departments can usually tell the driller more than the latter knows about where he is going to pick up certain formations, how thick it ought to be at the particular point, and possibilities of oil or otherwise," Kirchner, a veteran in the business, told the organization.

New Name

The Mid-Continent Oil Scouts and Land Men's Association is the new name of the association following a vote of the body to include land men in the name as well as welcome them into the organization. At this time there are 137 members of the association, a figure that is expected to be more than doubled before the next convention, to be held in 1929. The place of meeting was not named at the convention, it having been considered wise to postpone selection of the city because conditions might change the prospects.

Fred Hill, scout for Mid-Continent Petroleum Corporation, Shawnee, Oklahoma, headquarters, will lead the group during the coming year, having been unanimously elected as president of the association, succeeding C. E. Savage, of the Carter Oil Company. The welcome of land men into the association was shown by the unanimous election of C. R. Welch, Ponca City, land man for Comar Oil Company, for first vice-president. Bob Brewer, scout for Barnsdall Oil Company in the Wichita, Kansas, district, was named second vice-president of the association. Simon Crites, of the Phillips Petroleum Company in the Bristow district, who has served the association since re-organization as secretary-treasurer, was re-elected for that job. All of these officers are automatically members of the board of directors. On return to their respective districts the members will elect a man from their district to serve on the board for the coming year, and this board will in turn elect the board's chairman. Members of the board of directors now retiring are Rex L. Dawson, Carter Oil Company, chairman; H. H. Thooming, Gypsy Oil Company; C. P. Piggott, Pure Oil Company; C. A. Barlow, Carter Oil Company; H. N. Guthrie, I. T. I. O. Company; G. W. Greenlee, Mid-Continent Petroleum Corporation, and C. W Michaels, Shaffer Oil Company.

Large Attendance

Heavy rains falling pretty generally over Oklahoma and Kansas two days preceding the convention failed to cut much, if any, slice off the attendance, and the crowd was estimated to pass 200. S. M. "Puny" Blevens, head of the committee on entertainment, was given a vote of thanks for putting the convention over in good order. His assistants on the program committee were Pat Norwood, Prairie Oil & Gas Compay, and G. W. Greenlee, Mid-Continent Petroleum Corporation, both from the Cushing district. The committee was aided by many citizens of Guthrie, who offered their help in outlining a fine program of entertainment for the visitors. Visiting ladies were entertained at the homes of Mrs. Blevens and Mrs. J. J. Hildreth and at the Guthrie Country Club, and golf and fishing were offered as recreation for the association members and visiting friends.

The crowd took a wide range in variety—they all came to Guthrie. There was Ex-Governor Charles N. Haskell, Oklahoma's first governor. Also there was Judge James A. Veasey, chief counsel for the Carter Oil Company, a member of the President's committee of nine on conservation, and a leading legal advisor of the industry in the Mid-Continent. C. C. Hildebrand, who scouts the Panhandle of Texas division for Phillips Petroleum Company, Amarillo headquarters, was present, recalling the early days of the association, when he served as its first president. J. R. Craun, Carter Oil Company scout in the Burbank district, the scout of longest service in the Mid-Continent, with more than 30 years with the company to his credit, was on hand. Colonel H. L. Wood, the oldest oil writer in Oklahoma, now covering South-Central Oklahoma for the Shawnee News, was given a place at the speaker's table, and Governor Haskell said something in his address about Wood having helped count the money paid at the Louisiana Purchase. Marland Oil Company furnished the largest man in Dick Collins and the smallest in D. P. Marshall, both of Ponca City.

Judge John J. Hildreth of Guthrie welcomed the scouts with an address at the Friday evening banquet, and then served as toastmaster of the occasion. Rex L. Dawson spoke on scouting, depicting the early history, and bringing it down to present day methods, showing the evolution of the job. R. S. McFarland, superintendent of the land department of Twin States Oil Company, spoke on the cooperation between scouts and land and geological departments. Ex-Governor Haskell told much of the history of oil and railroading in Oklahoma, and compared the old and present values of land in the State. Judge James A. Veasey made the keynote talk of the evening in which he stressed the importance of cooperation to keep the oil business in its own hands. "The neglect of the dollar of tomorrow and the striving for the dollar today has served to prevent the inauguration of a sane policy in the industry," he said, and plead for a broader view in the future so that some stable end might be accomplished through evolution, not revolution. "The industry," he brought out, "is now on the road to success, but this will not reach very far unless such situations as the present overbalanced one are anticipated and prevented." He stressed the folly of government control, where men who knew nothing of the oil business would make a sad attempt to guide it.

The Guthrie Chamber of Commerce Oil Committee, headed by W. R. Welch, of Welch, Acton and Brown, Logan County operators, furnished prizes for the golf, bridge and fishing contests staged.

A luncheon of the chief scouts was held Saturday at noon, at which time the oil writers attending the convention were the guests of Raymond Fields, editor of the Guthrie Daily Leader. A dope sheet was published by this paper featuring the convention, and was distributed at the convention banquet Friday night. A carnival dance Saturday night closed the two day session.

The essence of the Guthrie convention indicates that more business and better organization will be the goal of the association in the future. The element of strict business is seen to have entered this convention more than any previous meeting of the scouts, and such a move is predicted to be followed by the organization hereafter.

Long Beach Should Reach 225,000 Barrel Peak by July

Eight completions during week show as high average as two months ago; original Potrero well blows in as gasser

By BRAD MILLS
Staff Representative

LOS ANGELES.—With production rapidly approaching 175,000 barrels and about 80 wells due for completion within the next 60 days, the Long Beach field probably will attain a peak of 225,000 barrels before the first week in July. After five months of feverish activity, during which the complexion of the situation has changed several times, the deep zone is beginning to reveal its true possibilities.

Eight wells were completed during the past week and the average initial yield was almost as high as a similar number of producers completed two months ago. The decline of the older wells is much slower than anticipated and the new completions are having little difficulty in sending the field production upward. The original theory was that the natural decline from the first 50 wells would be so rapid that the new wells would count for little toward a new peak.

The development of the deep zone has been a very slow and tedious process. In the beginning it was believed that not more than 100 wells would be drilled or deepened. Already 75 wells have been completed and there are still nearly 200 active operations. An average of five new locations are being made each week, but this number will soon be reduced. As the drilling campaign progressed it gained momentum, now comparing favorably with the development of the upper zone in 1923. The operators are much more experienced, however, and are finishing their wells with the utmost precision. During 1923 it was a real achievement to complete a well below 5000 feet. With heavier equipment, core barrels, added experience and the knowledge of sand conditions in the field, wells are being completed even below 7000 feet. The ultimate effect of completing the wells several hundred feet deeper than originally intended will be very great. The peak will come at least two months later and the decline will be much slower than was predicted in the most conservative estimates of six months ago. Although a town lot proposition, the operators are all financially strong and will not complete their wells in a haphazard way. It is largely for this reason that development has been slow. The discovery that 6500-foot wells are often better producers than those only 6000 feet caused an almost total absence of completions for nearly a month and threw the entire drilling program from its original course. Rather than rush their wells to completion for the sake of early but uncertain production, the producers are pursuing a deliberate course.

By producing only that part of the oil sand which lies below the old producing level, good results have been obtained. When the casing is cemented above the level which has been used for years, much of the pressure from the newly opened zone is lost. The natural tendency of the gas and oil is to come to the surface, but the back pressure from the well forces much of the production into the depleted layers between the bottom of the casing and the new oil sand. Only in the extensively drilled areas is such a condition readily apparent, however.

Long Beach Completions

With the completion of Jonah Jones 5, the General Petroleum Corporation has entered with a bang the ranks of the deep sand producers. The well was drilled to 6813 feet and produced 3800 barrels during the initial test. The oil is 30.2 gravity and clean. The company is drilling 10 additional wells to the deep zone.

In marked contrast to a former completion, the Union Oil Company has placed L. B. C. 4 on production with an initial yield of 2800 barrels of clean oil. The well was drilled to 5879 feet. George F. Getty completed Cobb 17 with an initial production of 2200 barrels from 6094 feet. The oil was only 27 gravity and showed a cut of 10 per cent. Richfield continued its unbroken record with the completion of Bernstein 2A and Green 5. The former was completed at 6174 feet with an initial production of 1600 barrels and the latter was a 1000-barrel producer from 6400 feet. The oil from Bernstein 2A was 30.4 gravity and clean, but Green 5 made a rather poor showing with a 26 gravity, 19 per cent product. Pan American's Cheney 2, a workover, was put on production at 5392 feet, having been plugged back to this depth from 6157 feet. Production was 1300 barrels of 27.6 gravity, clean oil. The well was originally drilled to 5392 feet, but plugged and produced at a higher level. It was then deepened below 6000 feet and plugged to produce at exactly its former bottom. Graham and Loftus, independent operators, completed Mack 1 as a 2000-barrel producer from 6110 feet. The oil was 28 gravity and very clean. The Crown City Oil Company did not fare so well in the completion of Graham 2, which was a 600-barrel producer from 6400 feet. The oil was only 26 gravity and showed a cut of 26 per cent.

Richfield has stopped drilling at 7401 feet in Denny 6, the deepest well ever drilled in the Long Beach field. The company will set casing around 5300 feet, giving the well more than 2000 feet of producing sand. The outcome of the test will be watched with much interest.

Potrero Blows in Gasser

Associated Oil Company's Cypress 2, the 1000-barrel light oil producer in the new Potrero field, is still shut in awaiting the construction of additional storage. The company's Cypress 1, which has looked first good and then bad, unexpectedly blew in as a 20,000,000-foot gas well while the crew was attempting to pull a string of 4¼-inch casing from the hole. The casing parted at 4260 feet, allowing the gas to escape. The well was out of control for two days and was capped with much difficulty. The gas is dry, but may prove useful in operating gas lift system if such an installation is needed at any time in the field.

Some excitement was recently caused by the report that the Milham Exploration Company has found oil in its Kettleman Hills test, Section 2-22-17. Oil showings were encountered around 7200 feet, but no test has been made. The company recently lost about 300 feet of drill pipe in the bottom of the hole, but is sidetracking it. The M. K. and T. Oil Company has picked up good oil showings in its outpost well, near the Ventura field, adding some weight to the theory that the structure may extend farther south than the present producing limits. The first showings were found at 4600 feet and have continued to the present depth of 4860 feet.

Rincon Assumes Doubtful Role

After several favorable developments, the Rincon field has again assumed a rather doubtful role. Since the field was discovered last fall, it has made many bids for recognition, but has failed to convince the conservative operators that it will become a major factor as long as operations are confined to the upper zone. The completion of three good wells around the 3100-foot level, after it appeared that it was useless to make further efforts to develop the upper sand, has temporarily removed the idea of abandoning the shallow sand. For a time it seemed that the most sensible plan was to eliminate the discovery zone entirely,

since the performance of the earliest completions was far from satisfactory. It has developed, however, that certain layers of the first zone have possibilities when a satisfactory water shutoff is effected.

The Pan American Petroleum Company's State 1, now the most interesting test in the field, failed to make a very impressive demonstration on a recent test and probably will be deepened. State 2 was the first test to encounter the compact layer of oil sand below 3900 feet and cores showed a good oil content. The well was drilled to 3955 feet, with the 8⅝-inch water string cemented at 3905 feet. The swab was run several times, but the well failed to flow steadily. Production is very unsteady and probably not more than 150 barrels. With a good body of shale on top of the oil sand and no water in evidence, the well had much in its favor. The water shutoff apparently is effective, but the gas pressure is not all that is desired. The three good wells completed around 3100 feet by the Miley and General Petroleum interests are still producing, but the yield is far below the initial gauge. A body of sand, such as has made other California fields famous, has not yet been found.

Chanslor-Canfield Midway Oil Company's Hobson 1B, which unexpectedly started flowing a week ago from 4416 feet after a shot to loosen the 4¼-inch casing, is still flowing occasionally by heads, but cannot be classed as a commercial producer as it now stands. The action of the well removes much of the doubt concerning the southeastern flank of the structure, but does not definitely stamp the area as proven. The freak flow is a favorable indication, but may be coming from a thin layer of sand, rather than a true producing bone of commercial caliber. Since the well is located at a much greater elevation than those along the coast, it probably is producing from a sand corresponding to that found at 2600 feet on top of the structure.

Many Tests Idle

The percentage of idle tests in the settled fields of the Los Angeles basin is higher than at any time for several months. Huntington Beach, Torrance, Dominguez and Rosecrans have a large number of idle wells, while the other smaller fields are comparatively inactive. The chief interest in these areas is centering around the occasional deep tests. The Barnsdall Oil Company has cored some promising sand from 6100 to 6110 feet in O'Dea 9, an important deep test in the Rosecrans field. The company has already developed production below 5000 feet and the presence of oil sand and shale below 6000 feet is especially promising. In the Huntington Beach field, J. E. O'Donnell has stopped drilling at 5500 feet in Treet 1, the deepest test in the townsite area. The well showed little promise below 5000 feet and probably will be abandoned. The Chanslor-Canfield Midway Oil Company has completed No. 81 in the Torrance field with an initial production of 45 barrels from 3750 feet. The well was the first completion for several months. The company has also located a well on Section 10-4-14, following a long period of inactivity. Continental's Kraemer 5, the most interesting deep test in the Richfield area, has been drilled to 5350 feet, making it the deepest well yet drilled in the western part of the field. Shale and oil sand were encountered at 4900 feet and oil showings have been sufficient to warrant a production test. A water string will be set above 5000 feet for the test. Continental developed a large production below 4000 feet on what was once regarded as very questionable acreage. Production below 5000 feet in Kraemer 5 would greatly increase the value of many leases lying in the western fringe of the field.

Few new wells will be started in the Midway-Sunset area during the curtailment program, unless an unexpected deeping campaign is waged in the vicinity of Section 8-32-23, where the Republic Petroleum Company recently completed a 1100-barrel well at 2750 feet. The outcome of the Chanslor-Canfield Midway Oil Company's test on the same section will have an important bearing upon future developments. While the Republic producer is still flowing at about its original rate, additional completions are required to prove the productive area of the new zone. The Chanslor-Canfield Midway well is checking slightly lower on the structure than the Republic producer, revealing that the latter may be ideally located.

The Petroleum Securities Company has drilled through 40 feet of oil sand between 4525 and 4565 feet in Diablo 1, located in the Diablo Canyon, near Piru, and has set a string of 8⅝-inch casing at 4145 feet to test the bottom layers of the formation. The well apparently is located on a well defined anticline which has not been tested at such a depth. The oil swabbed from the hole showed a much higher gravity than that produced nearby in the shallower sands.

The California Petroleum Corporation has definitely decided to drill a well near Arvin, in Kern County, following an agreement reached with the Marland Oil Company, which has under lease nearly 5000 acres in the district.

Buttonwillow

Bakersfield, Calif.—The Milham Exploration Company, one of the pioneer operators in the Buttonwillow district, is locating another well on the southwest quarter of Section 5-28-23. It will be the fifth test drilled in the immediate district by the company, which has developed a large gas production from earlier completions. The area is looked upon as a possible gas supply for cities in the upper San Joaquin Valley and plans for the construction of a pipe line from the field to San Francisco have been entertained at different times in the past.

Standard Inaugurates Six Day Week for Drillers

Los Angeles.—Drilling crews employed by the Standard Oil Company of California will be required to work only six days per week in the future, with no reduction in monthly salary, according to an announcement made by the company. In announcing the adoption of the new plan, the Standard emphasizes the fact that the new policy can be carried out without jeopardizing the successful drilling of the well. Where it was originally thought that more could be accomplished by employing only two crews, it has been proven that three crews are practically as economical as two, the announcement states. For the same reason, it is believed that by giving the drilling crews a day of rest each week, practically as much will be accomplished. The Standard Oil Company of California placed in effect in 1917 the eight-hour day for all employees except drilling crews. In announcing the six-day week for drilling crews, the Standard probably was influenced by the recent curtailment of operations in California. Such a plan will provide employment for one extra crew for each seven drilling crews now employed, if drilling operations continue at the present rate. The recent curtailment affected all classes of oil field workers, and the Standard, as well as other large companies, are employing the men to clean up the leases, build roads and clean out many of the older wells.

Kern County Leasing

Bakersfield, Calif.—The major companies are actively engaged in leasing wildcat acreage in all parts of Kern County, particularly blocks lying near proven and semi-proven structures. The Edison, Fruitvale, Mt. Poso, Comanche Point and Semitropic districts have also reported considerable leasing during the past two weeks. Marland, Continental and Barnsdall have secured leases on small blocks in the Comanche Point area, while Shell has acquired about 90 acres in the Fruitvale district.

San Francisco.—Oil field operations reported to the State Oil and Gas Supervisor during the past week showed 34 new wells started, as compared with 13 during the previous week. After a lull of a few weeks, the Long Beach field jumped to the front with 13 new locations. The total new wells this year is 323, as compared with 512 at the same date last year. The Seal Beach and Huntington Beach fields last year accounted for the bulk of the new locations, while the Long Beach field comes in for first honors in 1928.

W. H. Post has been appointed manager of the Pittsburgh branch office of the Timken Roller Bearing Service and Sales. Mr. Post has been with the company for several years, during which time he has been active in sales work in the Cleveland district.

Cooperative Wildcatting Proving Area South of Little River

Three additional spots shown productive indicate greater potentialities than heretofore considered; fields generally show continued decline

By WALLACE DAVIS
Staff Representative

TULSA.—The past week was a history making period for co-operative wildcatting in the restricted district south of Little River field of Greater Seminole. Within the last three days in the week three of the 10 "permitted" wildcat tests drilled to determine the possibilities of the 7-6 territory were completed as producers ranging in yield from 110 to 250 barrels an hour. Thus three additional spots are proven in the township, and practical assurance is given operators that this entire chain of production will eventually be linked as one producing strip to Little River field. At the time these wells were undergoing completion the south edge of Little River field was being proven up as a stronger producing area than has been heretofore generally considered.

Reiter-Foster Oil Company's Bunyard 1, located in the southeast of the southwest of the northwest of Section 14-7-6, flowed 110 barrels an hour Saturday morning from one foot of Wilcox pay topped at 4256 feet. The oil tested 41.4 gravity corrected, and is being taken by Sinclair Pipe Line Company.

Shortly following Reiter-Foster's wildcat producer The Texas Company brought in Hotulke 1, located in the northwest of the southwest of the northwest of Section 23, for 5500 barrels initial production from 4166-72 feet in Wilcox. This well is a south offset of Independent's Harris 1 discovery well late in 1927, and the Independent owns a half interest in the acreage and well, while The Texas Company has charge of operations. Harris 1 was shut in about 10 days ago following completion of Gypsy's Canard 1 on the west as the first offset. Under the terms of the conservation program both wells were shut in after the first offset had been produced three days. Likewise, the new producer was to be shut in Tuesday morning, May 1, as was the Reiter-Foster producer.

Gypsy Oil Company furnished the next excitement in the "restricted area" Sunday by completion of its Hulhoke 1, another of the 10 test wells, for 122 barrels an hour from two feet of Wilcox sand topped at 4442 feet. Location is in the northeast of the northeast of the southeast of Section 14-7-6. This well, which shows to have run unusually low, showed no sign of weakness as a result, and some of the depth is attributed to a possible crooked hole.

Independent Oil & Gas Company's Harris 5, the southernmost of the 10 test wells, located in the southeast of the northwest of Section 23, was Monday showing to be the next one in. It topped the Viola lime at 4145 feet, and Monday morning was drilling at 4200 feet with oil showing, believed to be from the top of the Simpson sand, just over the Wilcox.

On the south edge of Little River field proper Gypsy Oil Company's Renton 3, in the southwest of the northeast of the northeast of Section 11-7-6, was swabbing 50 barrels an hour from Wilcox sand topped at 4088 feet and drilled to 4113 feet. On the southwest of this location is Pure Oil Company's Harjo 1, in the northeast of the southwest of the northeast of Section 11, which had the Wilcox at 4200 feet and at 4210 feet swabbed 430 barrels in 10½ hours ending Monday morning. Gypsy's Renton 1 is flowing approximately 800 barrels on air following completion three weeks ago, and Renton 2, offset to Carter Oil Company's Jackson 1, was letting cement set Monday after resetting six-inch casing at 4362 feet. The Viola lime was topped in this hole at 4338 feet.

Mid-Continent Petroleum Corporation's Bruner 1, in the southeast corner of Section 11-7-6, a northwest offset to Snowden & McSweeney's Tiger 1 wildcat discovery, was swabbing 230 barrels from Simpson sand at 4336 feet Monday. Three days after completion of this well in the Wilcox, not as a Simpson sand producer, it will be pinched, with the Tiger 1, to 50 barrels daily. The same agreement applies to Magnolia's west offset or Carter's north offset.

Production Turns

After dropping to a new low figure of approximately 271,500 barrels Wednesday of last week, Seminole took a sharp turn upward over the week-end, gaining 8000 barrels in a single day, due entirely to new flush oil south of Little River. Production for the gauges of Sunday and Monday mornings are as follows:

Field	April 29	April 30	Wells
Little River	47,567	48,836	115
Bowlegs	72,207	71,636	313
Earlsboro	91,835	91,628	287
Seminole City	53,160	53,526	304
Searight	15,251	14,736	68
Totals	280,020	280,362	1,087

This output places Greater Seminole fields 5555 barrels above the level a week previously. The extent of the increase followed an increase of 9691 barrels at Little River from Friday to Sunday.

Outside of the active area being tested south of Little River, Greater Seminole fields are growing unusually quiet. By June 1 activity in the five pools proper should be over. Out of 61 rigs running during the last week in April, 48 were below 3700 feet, slightly above the common level of standardization. Only 10 rigs were up for drilling, and six locations were staked. Few other locations are expected to be staked outside of wells obligated by short term leases to drill, and as those now under way are completed activity will continue to decrease. Twelve operations in Greater Seminole are shut down.

Production, excepting the new flush south of Little River, is continuing to show a gradual decline in the Seminole territory. There are 452 wells, or 42 per cent of the producers in the five fields, making salt water, while only 61 wells, or six per cent of the total number of producers, are flowing naturally.

Vote to extend drilling south of Little River 30 days to June 15 was made, with exception of Reiter-Foster and Blackwell Oil & Gas Company. Operators favoring extension signed the agreement to extend shutdown, and efforts to effect reconsideration by others are being made by the umpire on request. Daily production of pinched wells was raised from 50 to 100 barrels.

Sinclair Oil & Gas Company's Tewee 1, in the northwest of the southwest of the northeast of Section 14-7-6, swabbed 90 barrels in nine hours Tuesday from the upper Simpson series at 4098 feet, being the fourth of 10 test wells to find the pay.

Independent Oil & Gas Company's Harris 1, wildcat discovery of November 3, died Monday after pinching to 50 barrels April 20, but production of the 50-barrel maximum was regained Tuesday.

The Texas Company and Independent's Hotulke 1, south offset to the Harris 1, and Reiter-Foster's Bunyard test well were both pinched to 50 barrels Tuesday.

Mid-Continent Petroleum Corporation's Bruner 1, northwest offset to the Snowden-McSweeney discovery in Section 13, was completed Tuesday, producing 75 barrels per hour from the Wilcox at 4350-54 feet, requiring that both shut in May 4.

Little River reached a new peak Tuesday with 49,850 barrels production, boosting the Greater Seminole output to 280,352 barrels.

Kelso Bayou Production Increased To 3500 Barrels Daily

Yount-Lee Oil Company completes 2400 barrel well as field's best producer; other Coastal areas active

By JACK LOGAN
Staff Representative

HOUSTON.—Kelso Bayou dome, east of the old Hackberry dome in Cameron Parish, Louisiana, was the scene of the most interesting activity of the Gulf Coast during the past week, the outstanding feature of the week's work there being the completion by the Yount-Lee Oil Company of its State Land 10 as the sixth and best producer thus far completed in the field.

Producing from 20 feet of sand at 3940 feet, the well had an intial flow of 2400 barrels of pipe line oil when completed last Friday, with the production pinched in with a one-half inch choke, and early this week it was reported to be still making about 2200 barrels of clean oil a day.

This well is in the water of Kelso Bayou on a State lease, and is the most easterly producer of the field.

A few days before the completion of the Yount-Lee well, the Caldwell 2 of the Calcasieu Oil Company, Magnolia Petroleum Company and the Union Sulphur Company came in for an initial flow of 1000 barrels of pipe line oil after being deepened from its original producing level at 4000 feet to 4200 feet. But shortly afterward it began making water, and the percentage of water rose rapidly, until on Monday of this week the well was making mostly water, flowing by heads. The rapid intrusion of the water is believed to be due to casing trouble. The plans are to abandon the well temporarily. The Caldwell 2 was the discovery well of the field, and from the 4000-foot level produced oil for several months following its completion November 5, 1927, for an initial flow of 1000 barrels.

The Caldwell 3, also owned by the Calcasieu Oil Company, Magnolia Petroleum Company and the Union Sulphur Company, which was completed about a week ago for 800 barrels of oil with 25 per cent water, rapidly went to water, and it will be deepened from its present depth of 4000 feet.

Back toward the southwest of the present production of the field, the Calcasieu Oil Company is rigging up on the Doiron 2, on a lease which it holds jointly with Magnolia and Union Sulphur. The Doiron 1 was recently abandoned at 5100 feet after failing to get any significant showings.

The Louisiana Land & Exploration Company, drilling its Calcasieu Lake B-1 in the waters of Calcasieu or "Big" Lake, at a point about one-half mile northeast of the present production on Kelso Bayou Dome, drilled into cap rock at 3255 feet after encountering sand with an oil show around 3200 feet, and according to a late report was down to 3265 feet, losing returns, with the probability of being compelled to abandon the test.

The Yount-Lee Oil Company's State Land 8, located in Kelso Bayou, a little west of the present producers, is due to be drilled in within a few days, casing being set and cemented over an oil sand, and the depth of the hole being around 3940 feet.

Including the production of Yount-Lee Oil Company's new well, the present daily yield of the field is around 3500 barrels, coming from four wells. The Olevia 1 of the Calcasieu Oil Company, Magnolia Petroleum Company and Union Sulphur Company is still making an average of about 1000 barrels a day after flowing for over three months; while the Watkins 1 of the same interests is producing approximately 200 barrels a day. In addition to the 2200 barrels a day from the new producer, the Yount-Lee Oil Company has about 150 barrels daily production from its State Land 6, which was completed several weeks ago.

Offsetting the new Yount-Lee well on the northwest the Calcasieu Oil Company and its above mentioned associates will make a new location within the next few days on the Watkins land.

Fourth Sulphur Dome Well

Another area in South Louisiana which is assuming importance as a new source of oil is Sulphur Dome, Calcasieu Parish, operated solely by the Union Sulphur Company, which for 30 years produced sulphur from the dome. During the past week the fourth oil producer of the field was completed: Fee 723, which came in for an initial flow of 1250 barrels of pipe line oil, which tests 22 gravity. The depth of the well is 3280 feet. The completion of this well brings the average daily production of the field up to about 2500 barrels. The other three wells which are producing are the 721, 722 and 724 on fee land of the company. These wells are on the southwest side of the dome. Union Sulphur Company has four rigs in the field, and the present operations are as follows: Fee 725 is drilling; Fee 726 is a derrick; Fee 727 is rigging up, and Fee 728 is a location.

At Loureauville, Iberia Parish, Gulf Refining Company has made a small pumper of its State Z-4, the production being about 15 barrels a day, coming from 1180 feet. The dome at Loreauville was discovered by seismograph, and several producers have been drilled there, but there has been no marked success thus far in the development of the field.

Rycade Oil Corporation's Fee 2 at Bayou Boullion, which came in several weeks ago as the discovery well of the area, is now swabbing about 350 barrels of oil a day, having recently quit flowing. It will be put on the beam. Rycade's Fee 3 is drilling at 2865 feet, thus being near the pay level. The depth of the discovery well is 3044 feet.

Gulf Refining Company's United Lands Company 6 at Sorrento Dome, Ascension Parish, east of the Mississippi River, is still shut in, as is the United Lands Company 4 due to lack of storage facilities. Gulf is rigging up on the No. 7 on the same lease.

Old Fields

Among the older fields of South Louisiana the only completion recorded during the week was Vinton Petroleum Company's No. 62 on the Gray 20-acres, a 75 barrel pumper at 2375 feet.

In the Texas Gulf Coast there was one wildcat completion, Dr. P. S. Griffith's Fee 1, located eight miles northwest of Houston, being abandoned at 700 feet.

Among the proven fields of the Texas Gulf Coast, Pierce Junction and Blue Ridge were outstanding in the contribution of new oil.

Of the 7000 barrels total new oil of Coastal Texas for the week, over 4000 barrels was supplied by Pierce Junction, where three flowing producers were completed. The Moody Corporation's Whitehead A-1 came in for 2500 barrels at 4750 feet; Shaw et al's

Fitzsimmons 2 was good for 1500 barrels at 4425 feet; and the Rio Bravo Oil Company's Bender 8 had an initial yield of 100 barrels, the depth of the hole being 3330 feet.

At Blue Ridge the best well of the three completed was Gordon & Sharp's Blakely C-2, the initial flow of which was 1825 barrels at 1950 feet. Cunningham Production Company put its Blakely 1 to pumping at 3125 feet and the production was 175 barrels a day. Blakely & Means abandoned Blakely 1 after finding salt water at 3540 feet.

Gulf Production Company completed Tom Hogg et al No. 1 at West Columbia as a 150-barrel pumper after drilling to 2910 feet.

In the Spindle Top field Gulf Production Company's Oakwood Realty Company 13 came in flowing 305 barrels from 5535 feet.

Various other fields were also represented in the completions of the week. At Batson dome the Capitol Oil Company's Hodges 10 was completed as a pumper, making 200 barrels of fluid, including 30 per cent oil and 70 per cent water, the depth of the well being 3900 feet.

Gulf Production Company's G. E. Smith A-2 at High Island had an initial flow of 250 barrels at 2850 feet; its T. W. Davis 39 at Big Creek has been abandoned at 4140 feet, and its Tabb A-16 at Goose Creek was completed as a 40-barrel pumper, making considerable water, having been deepened to 3475 feet. Humble Oil & Refining Company's Gaillard 51 at Goose Creek, when deepened to 2150 feet, produced at the rate of 75 barrels daily, pumping.

Rycade Oil Corporation's State E-13 at Orange will be abandoned at 5690 feet.

Fort Worth, Texas.—Sinclair Pipe Line Company's main line capacity out of Oklahoma to the Gulf Coast is now above 30,000 barrels daily as result of the completion of 162 miles of eight-inch loops between Healdton and Mexia stations on April 24. Sinclair's crude requirements on the Gulf Coast have been in excess of the available supply in Texas for some months, and the added capacity out of Oklahoma will afford the necessary relief and retard heavy withdrawals from reserve stocks held in the Mexia district. Sinclair strung about 100 miles of eight-inch parallel to the original eight-inch line between Healdton and Graford stations, and inserted four loops aggregating 62 miles of eight-inch between the latter point and the Mexia station. This new pipe line work was done on contract by Booth & Flynn, and the final testing of the loops was completed early last week. The line terminates at Sinclair's refinery and export terminals on the Houston Ship Channel.

Field Men Take Up Practical Problems at Fort Worth

Organization Meeting of Texas, Louisiana, Arkansas Division of Development and Production Engineering is Well Attended

FORT WORTH. — Organization plans for the Texas, Louisiana and Arkansas Division of Development and Production Engineering were quickly perfected here last Wednesday and the balance of the day was given over to the discussion of important field problems and methods. More than 100 field men, production engineers and executives were present and participated in the open forum. Subjects considered included paraffin troubles, pipe corrosion and new developments in operating equipment and practice.

R. B. Kelly with the Pure Oil Company at Fort Worth was selected some time ago by the general division to serve as chairman of the Texas, Louisiana and Arkansas division and presided at the meeting Wednesday. Adrian Moore with the Rycade Oil Corporation at Houston was elected vice chairman and W. H. Meier with the Atlantic Oil Producing Company, Dallas, secretary.

A committee on membership, including J. Elmer Thomas, Fort Worth; Frank Gardner, Simms Oil Company, Dallas; A. W. Peake, Dixie Oil Company, Shreveport; Wm. Brookover, Panhandle Refining Company, Wichita Falls, and W. C.Thomas, Vacuum Oil Company, Houston, was selected.

A program committee consisting of W. H. Meier, E. R. Ames and S. M. Gladney was also nominated.

The Division of Development and Production Engineering of the American Petroleum Institute was formed at the annual meeting of the Institute in Chicago last December for the purpose of establishing an open forum where field men might engage in the discussion of practical field methods. The organization is divided into five regional divisions to serve the five geographical divisions of the oil industry. Divisional organizations corresponding with the Texas, Louisiana and Arkansas division have already been completed for the Eastern States, Rocky Mountain district, Mid-Continent and California.

Papers Bring Up Discussions

Three prepared papers dealing with drilling and production practices in the Permian Basin of West Texas, modern deep well drilling practice in the Gulf Coast and paraffin and associated production problems in the Texas Panhandle were presented at the meeting in Fort Worth and prompted considerable discussion which later involved into consideration of the advantages of standardization work now being conducted by the American Petroleum Institute.

This discussion lead to the suggestion that one particular phase of the

R. B. KELLY, *Chairman*

ADRIAN MOORE, *Vice-Chairman*

Officers of the Texas-Louisiana-Arkansas Division of Development and Production Engineering.

standardization work be included in each future meeting in order to better familiarize the man in the field with what has been accomplished in this work. Carl A. Young, Director of the Division of Standardization, was present and heartily indorsed such a plan and agreed to see that such subjects are arranged.

In this connection a resolution was made from the floor and adopted that the committee on Standardization of Derricks be asked to include in their studies the advisability of standardizing on bull wheel and calf wheel posts making an interchange of these parts possible on all derricks.

Emphasis was placed on the necessity for keeping the discussions before the division of Development and Production on a practical field plain rather than to attempt the solution of technical and semi-engineering problems. A. W. Peake, with the Dixie Oil Company at Shreveport, urged that papers presented before future meetings be short and confined to specific field problems and methods.

The next meeting of the newly formed Texas, Louisiana and Arkansas divisions will be held sometime during the fall.

REGISTRATION OF FORT WORTH MEETING

Texas, Louisiana, Arkansas Division of Development and Production Engineering, April 25.

Name and Company	Address
W. K. Mellon, Petroleum Rectifying Company	Houston
W. S. Doherty, Humble Oil & Refining Company	Houston
A. W. Peake, Dixie Oil Company	Shreveport
A. M. McCorkle, Dixie Oil Company	Shreveport
E. V. Foran, Marland Oil Company	Breckenridge
C. V. Temple, Humble Oil & Refining Company	McCamey
R. E. Bridges, Humble Oil & Refining Company	Wichita Falls
E. A. Morris, Humble Oil & Refining Company	Wichita Falls
G. H. L. Kent, Humble Oil & Refining Company	Houston
E. R. Ames, Elliott Core Drilling Company	Houston
L. H. Courtright, Elliott Core Drilling Company	Houston
R. A. Wilson, Guiberson Corporation	Dallas
A. O. Behling, Humble Oil & Refining Company	Corsicana
W. W. Wallace, Humble Oil & Refining Company	Cisco
Willis Storm, Pandem Oil Corporation	Dallas
M. L. Brown, Sun Oil Company	Olney, Texas
S. M. Greenridge, T. & P. Coal & Oil Company	Thurber
W. C. Thomas, Vacuum Oil Company	Houston
M. C. McDowell, Rio Bravo Oil Company	Houston
Jas. Hutchinson, Rio Bravo Oil Company	Houston
Melbert Schwartz, Rio Bravo Oil Company	Houston
W. C. Trout, Lufkin Foundry & Machine Company	Lufkin
Walter H. Meier, Atlantic Oil & Refining Company	Dallas
C. B. Edwards, Lufkin Foundry & Machinery Company	Houston
Glenver McConnell, Roxana Petroleum Corporation	Tulsa
L. L. Lookabaugh, Roxana Petroleum Corporation	Dallas
C. W. Alcorn, Roxana Petroleum Corporation	Dallas
E. G. Allen, Roxana Petroleum Corporation	Dallas
R. H. Tash, Fort Worth Laboratories	Ft. Worth
L. L. Rector, Longhart Supply Company	Ft. Worth
W. D. Small, El Paso Foundry & Machinery Company	El Paso
T. K. Knox, Texas Leasing & Royalty Company	Dallas
W. J. Jackson, Southern Crude Oil Purchasing	Wickett
M. G. Stewart, Pelican Well Tool & Supply Company	Shreveport
F. S. Lane, Magnolia Petroleum Company	Dallas
W. S. Geary, Magnolia Petroleum Company	Dallas
F. G. Leidecker, Atlantic Oil & Refining Company	Dallas
W. L. Todd, Simms Oil Company	Dallas
Frank Gardner, Simms Oil Company	Dallas
P. S. Haury, Simms Oil Company	Dallas
R. I. Moore, Allis-Chalmers Manufacturing Company	Dallas
D. M. McCarger, Allis-Chalmers Manufacturing Company	Houston
Paul L. Brooks, Parkersburg Rig & Reel Company	Ft. Worth
J. A. Lane, Parkersburg Rig & Reel Company	Houston
Millard Land, Vacuum Oil Company	Houston
Linn K. Park, Portable Rig Company	Houston
C. F. Contois, Gulf States Utilities Company	Lake Charles
M. Manning, Humble Oil & Refining Company	Houston
J. A. Birmingham, The Texas Company	Ft. Worth
A. S. Field, Roxana Petroleum Corporation	Pyote
E. C. Lawry, Roxana Petroleum Corporation	Wichita Falls
Geo. B. Corless, Humble Oil & Refining Corporation	Amarillo
Wm. E. Hubbard, Humble Oil & Refining Company	Amarillo
H. L. Edwards, Humble Oil & Refining Company	Houston
J. W. House, Humble Oil & Refining Company	McCamey
F. S. Seeley, Humble Oil & Refining Company	Pyote
L. M. Landman, T. & P. Coal & Oil Company	Ft. Worth
R. Beattie, T. & P. Coal & Oil Company	Ft. Worth
C. W. Metzger, Haynes Stellite Company	Houston
E. E. LeVan, Haynes Stellite Company	Kokomo, Ind.
W. F. Sutton, Humble Oil & Refining Company	Mexia
R. L. Sloan, Humble Oil & Refining Company	Mexia
J. J. Potter, Jr., Rio Bravo Oil Company	Strawn
S. G. Childress, Rio Bravo Oil Company	Houston
John R. Suman, Humble Oil & Refining Company	Houston
C. A. Young, American Petroleum Institute	Dallas
R. B. Kelly, Pure Oil Company	Ft. Worth

Magnolia Plugs Hot Hole In Southwest Texas

San Angelo, Texas.—Magnolia Petroleum Company's deep wildcat test on the W. E. Whitehead ranch, Val Verde County, Southwest Texas district, was registering a bottom hole temperature of about 180 degrees F., when ordered plugged as a dry hole last week in shell and slate formation at 6725 feet. The temperature at the bottom of the hole would have reached the boiling point if carried to the 8200 foot level, according to a representative of the Bureau of Economic Geology of the University of Texas. Nine separate temperature tests were made in this wildcat between the 250 and 6600-foot level, at intervals ranging from 250 to 1500 feet, and at 6600 feet the actual temperature was 178.76 degrees F.

The crew was forced to work with insulated gloves in handling bits, bailers and other equipment when withdrawn from the hole, owing to the high temperature below the 5000-foot level. This wildcat was drilled with a Climax High-Speed "Paymaster" six-cylinder drilling unit on a block of 10,880 acres, and was spudded May 24, 1927. Only one minor fishing job was encountered in the drilling of this deep test, and the formations were practically dry from surface to bottom, except for enough water to drill with around the 1000-foot level. The last string of casing was 5 3/16-inch, 17 pound, set at 4430 feet. P. W. Lane was the driller in charge of the operations, and other members of the crew included Grant Mooney, driller; P. W. Lohan and Bob Woods, tool dressers.

The various bottom hole temperatures taken by the geological department of the University of Texas follows:

Depth	Degrees Temperature
250	72.83
500	75.73
1000	82.26
1500	90.20
3000	107.06
4000	124.80
5000	147.10
6000	165.56
6600	178.76

Water and Lye Solution Cleans Wells Of Paraffin

Paper read before the Texas, Louisiana and Arkansas Division of Development and Production Engineering, Fort Worth, April 25

By L. L. BECHTEL and WILLIAM O. BLENKARN
Midwest Exploration Company

TEXAS Panhandle oil deposits an undue amount of paraffin especially in the wells, and due to this fact all operators have been compelled to learn methods of handling it. As the large volume of paraffin is somewhat new to the industry a number of appliances and methods have been devised. Many of these are only partial remedies, yet they do assist the producer. Therefore as many schemes as are known to the writers will be given, and briefly described.

Before going into the subject a short description of the characteristics of the Panhandle oil and the troublesome paraffin may be of interest. The oil in Hutchinson County has a gravity of about 37 degrees Baume, with a congealing point between 50 and 55 degrees F. The bottom hole temperatures are about 95 degrees F. The paraffin deposits from the oil at temperatures as high as 80 degrees F., and after once deposited the melting point is between 140 and 145 degrees F. This paraffin is black with a slight brownish tinge, and of a soft granular appearance when first deposited, but becomes quite hard with age. These features are somewhat unusual, and very bothersome.

The trouble caused by the paraffin may be briefly outlined as follows: Hindering deposits in the wells and in the oil lines. Since the difficulty with the wells is probably of major importance, and at least is a subject in itself we will only discuss this phase.

Paraffin deposits in the well may be classified as those in the pipe, and that which is left in or on the face of the oil producing formation. By deposits in the pipe we mean that which accumulates in the tubing of pumping or gas lift wells, and in the casing of flowing wells. As to the paraffin deposits in the formation some are inclined to be a little skeptical, yet from results obtained with a hot salt water wash we believe in many wells this is found to be true.

In overcoming and removing paraffin, the means so far used depend upon heat or mechanical operations. This is due to the nature of paraffin, for its chemical reaction is very slight and with only a very few elements.

As we take up methods of handling paraffin let us first consider the pumping wells, then the gas lift wells, and then the flowing wells.

On pumping wells our experience has been mostly in the Borger District. With these wells the most common method of handling paraffined tubing is the frequent pulling of rods, and occasionally pulling the tubing and steaming it. Generally if rods are pulled often enough, the pulling of tubing for paraffin can be eliminated. The frequency with which rods must be pulled depends upon the nature of the wells and varies from every two or three days to two weeks. As the rods are pulled they are stripped clean of the paraffin with a piece of soft rope wrapped around the rod and held taut. When the plunger or traveling valve enters the denser deposits, which are usually in the top part of the hole, it scrapes its way through and brings out a goodly share of the paraffin ahead of it. But since the plunger or traveling valve is much smaller than the inside of the tubing considerable paraffin is left, which causes much trouble in running the rods back in the hole. Some times it is necessary to take off the plunger and run the rods with a soft rope swab. This swab is fashioned by tying a piece of soft rope on the bottom rod with a long series of half hitches. This enables the rods to be worked down through the paraffin, but when pulled out the soft rope will slide down to the bottom end of the rod and form a bunch at the upset which will mop the tubing. Always, before returning the traveling valve or plunger, it is advisable to pack all openings with a hard cup grease, otherwise it may be plugged with paraffin and the well will never pump. Here it might be well to mention that the positive acting valves such as the Baird are useful. But they can only be used on light wells since they are not rugged enough for heavy duty.

In steaming paraffin out of tubing a neat arrangement is used. A steam line is laid up close to the well-head with a short nipple sticking up. A stand of tubing can be set down over this nipple, and when steam is turned on the paraffin will melt and blow out at the top.

This explains the mechanical operations known so far of removing paraffin from the tubing of pumping wells.

Heating methods of handling paraffin in the tubing of pumping wells have taken several different forms, most of which are still in the experimental stage. Sources of heat adaptable to this purpose have been used in the form of steam or hot water, and electricity. With these it is possible to devise means of removing the paraffin without shutting down the well. Methods of using steam include: steam and hot water between the casing and tubing; steam placed down the tubing after the rods removed; and steam valve ejectors, which are an integral part of the tubing string. Electricity must be used with specially constructed heaters.

Running steam or hot water between the tubing and the casing was one of the first methods tried. This proved only partially successful, since it is of very little value save on light wells, and where little casing-head gas is present. Secondly a large space must be heated which requires a large volume of steam or hot water if the heating process is continuous. Then again there is the disadvantage of getting fresh water in the bottom hole formations, which is believed to be injurious to lime or dolomite causing them to sluff off.

Using steam in the tubing has been more successful, but in order to get the best results the rods must be pulled. This makes it only a periodic operation which is often used to eliminate a tubing job after the pulling of rods has failed to remove sufficient of the paraffin accumulations. This again has the disadvantage of allowing fresh water to reach the dolomite formations. However if the well is put back to pumping as soon as possible there is little danger of the water remaining long enough to do any damage. But sufficient steam must be used to melt all the paraffin or deposits will be left in the hole. This is due to the fact that ordinary methods of steaming do not melt all the paraffin, but only loosens it from the tubing and forces it in large chunks to the bottom of the hole.

There are two steam paraffin removing ejectors or valves that have been devised and patented; the purpose of which is to remove paraffin from the tubing.

Both of these devices are based on

the principles of placing steam in the casing, and using a valve or valves in the tubing which will open when steam pressure is built up in the casing. The idea is to place them below the paraffin region so the steam will blow these deposits out at the top of the tubing. The writers have not used these valves so must rely upon the other operators' experiences in reporting results.

One type has been successfully used by an operator in the Pampa District. They report one well that has been kept free from paraffin for three months. Before installing these valves it was necessary to pull the rods once or twice a week for paraffin. Other companies have not reported in their favor.

However on both steam ejectors it is probable that the results obtained depend upon the care and the knowledge with which they are handled.

Now to mention briefly the electric tubing heaters. The writers have worked a great deal with this method of elimniating or removing paraffin deposits in tubing. Splendid results have been obtained for periods of a month to six weeks in keeping tubing clean in badly paraffining wells. After electric problems had been satisfactorily solved, leaking seams presented mechanical difficulties, which necessitated redesigning and doing away with welding. The new designed heater is now about ready to run for further tests along this line.

Concluding the description of methods for handling paraffin in pumping wells, it might be well to state that the presence of water produced with the oil has been found to be a natural remedy. In this section the well that produces 30 per cent or more water is bothered very little with paraffin. And since much water is found in the Borger District at the present time, the necessity for solving paraffin problems is not as great as it was. Although it is still worthy of our best efforts.

Taking up paraffin problems of gas lift wells. In most of the gas lift wells in this district the oil was produced through the tubing. Since a paraffin scraper was developed that could be used in the tubing while the well was flowing this was found to be the best method of producing the oil.

The paraffin tubing scraper is a cylindrical shaped piece of iron, sharpened on both top and bottom ends, and fastened with two stiff straps to a sucker rod pin. With a couple of sucker rods for sinkers it is placed on a sand line which can be run in the tubing through an oil saver. Scraping the wells every day was usually sufficient.

The use of steam heating on gas lift wells is not recommended where sulphur gas is found. For the presence of moisture accelerates corrosion.

Flowing wells have been bothered to some extent with paraffin plugging the casing. It is only a short time ago that several flowing wells in the Pampa District gave trouble. This can be remedied by frequent swabbing and agitating with the drill tools. Should the well become plugged the only relief is a paraffin hook.

This finishes the discussion of methods of handling paraffin in the pipe, which leads up to paraffin in the producing formation.

The probability of paraffin being deposited in or on the walls of the bottom hole formations has become apparent since the wells in the Borger district have declined to small producers and the rock pressure has lowered. (The closed-in pressure of the wells that will be discussed averages about 100 pounds per square inch.) This belief is based upon the results obtained with a hot salt water wash.

A brief description will be given of the wash and the methods used, together with the results. The fundamental principle of the wash is simple. It is merely to pump hot salt water to the bottom of the hole to melt the paraffin so it can be pumped out with the oil.

Hot salt water from the well is used, since there is a possibility of fresh water causing dolomite to cave or sluff off in the hole. This belief is based on a little test made with a core sample of dolomite secured when drilling.

In this test a piece of dolomite was broken in two pieces; one piece placed in common surface water; the other placed in salt water from the oil wells. After a period of two weeks the sample in fresh water had completely disintegrated; while the sample in the salt water was still hard.

A concentrated hot lye solution has been used to precede the hot salt water. The idea being that this would act as a washing solution, emulsifying the hot paraffin so the water would have a greater carrying capacity. Results of production increase have not proven this much aid. This is probably due to the oil acting as a carrier of the melted paraffin; thus allowing the water to act only as a means of transmitting the heat.

The operations of washing a well will be described briefly.

Have a tank of at least 150 barrels of salt water steamed as hot as possible. The temperature of the water should be at least 190 degrees F. The water can be heated in a flow tank equipped with steam coils. From the tank the water can be pumped through the flow line to the well.

The sucker rods are pulled, and also the standing valve. Then the hot salt water is pumped down the tubing.

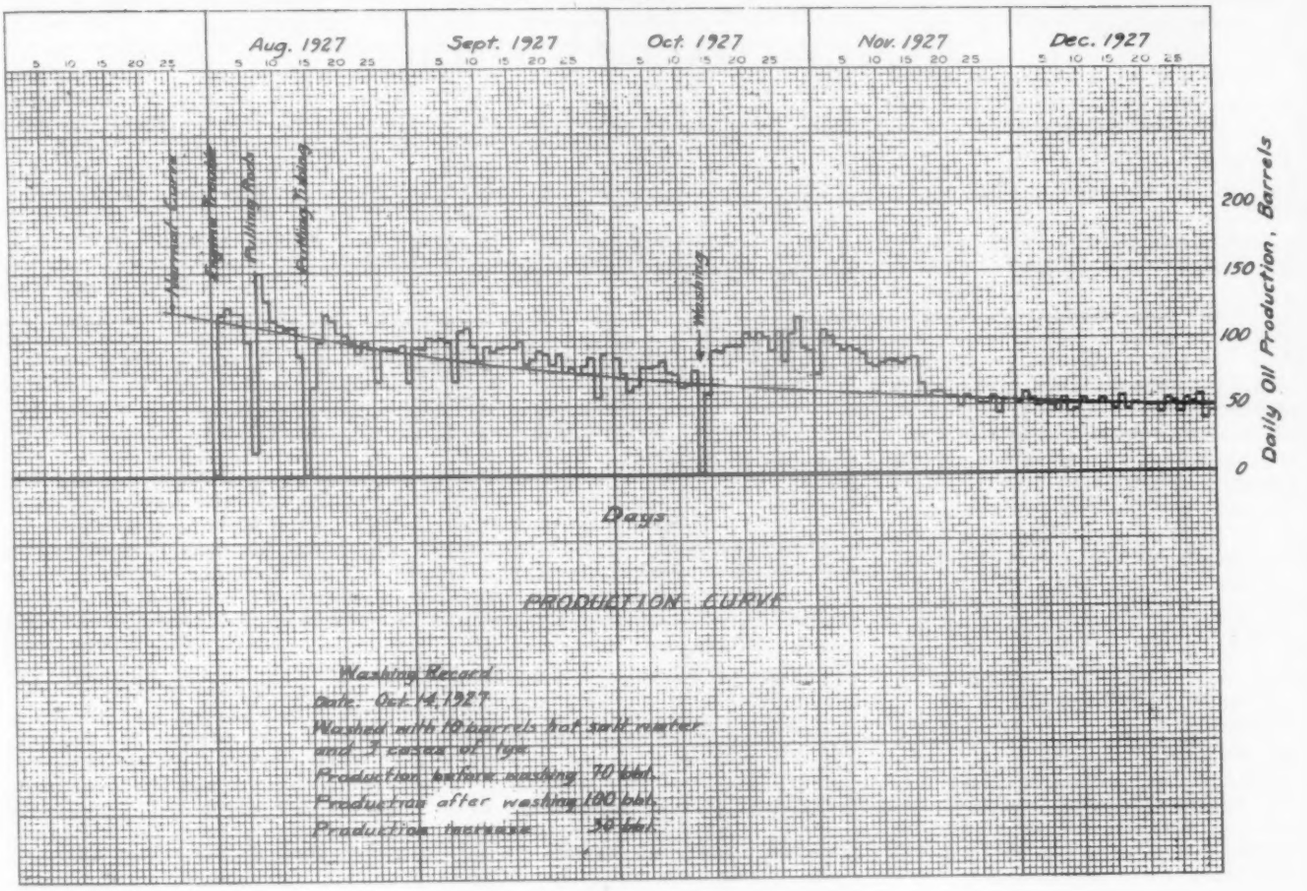
If a lye solution is used a small tank of about 10 barrels capacity can be placed on the derrick floor high enough to allow the solution to drain from the tank into the well. The ordinary wagon tank is very suitable. The lye is mixed with salt water and heated with live steam as hot as possible.

After the hot solutions have been put in the well, the rods should be run and the well put to pumping. This need not be rushed since it has been found that the solution holds its heat for several hours after reaching the

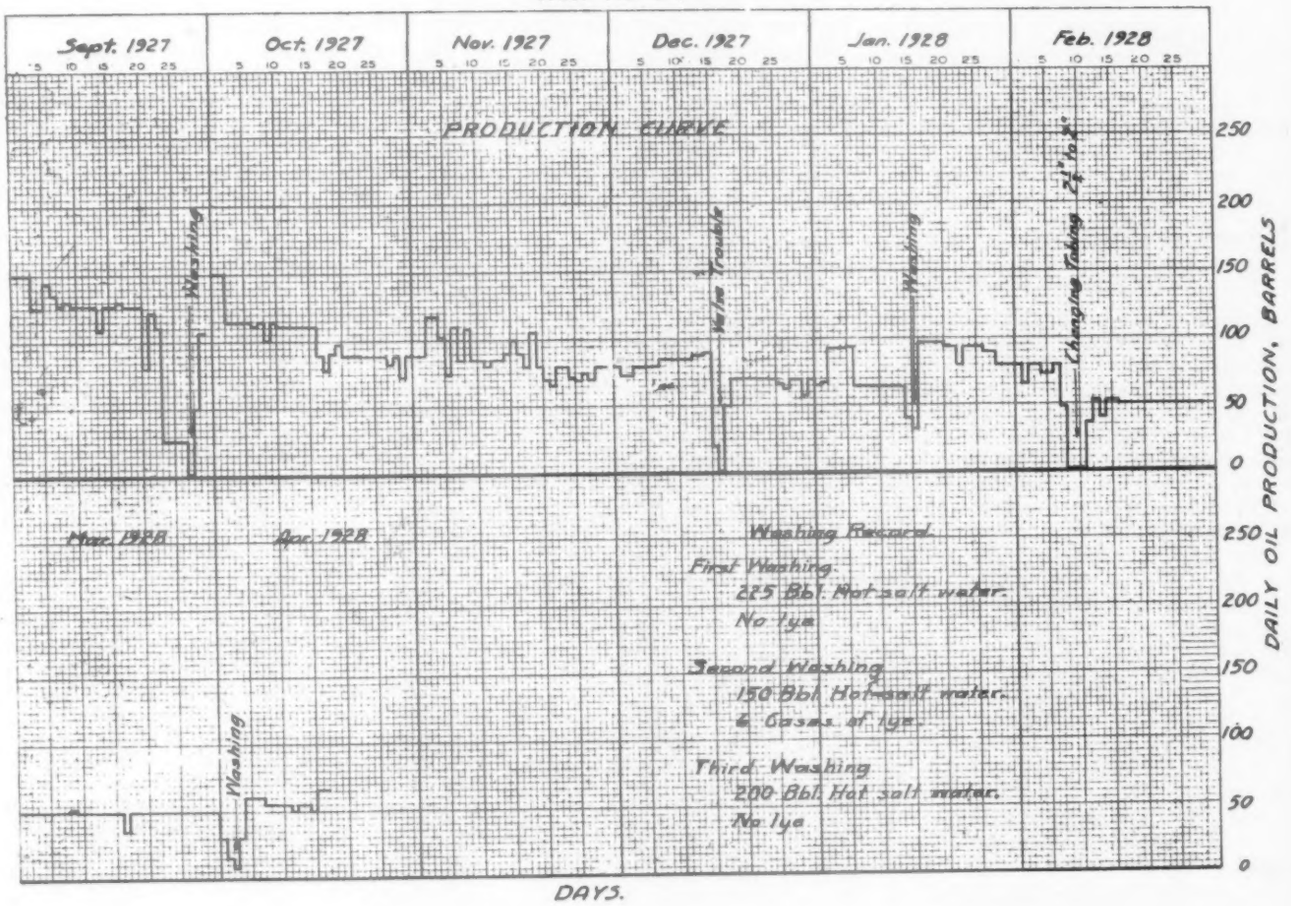
Schedule of Wells Washed With Hot Salt Water

Well No.	Washing	Date	Bbls. Hot Water Used	Cases of Lye	Oil Barrels per day Before	After	Incr.
C 3	1st.	3-24-28	150	None	66	60	D-6
C 4	1st.	9-28-27	225	None	27	150	123
C 4	2nd.	1-16-28	150	6	64	97	33
C 4	3rd.	4- 3-28	200	None	15	60	45
C 5	1st.	4-14-28	150	None	18	68	50
D 2	1st.	10-14-27	10 Steam down tubing 3 hrs.	3	70	100	30
H 2	1st.	11-10-27	250	240 lbs. Sal Soda	30	35	5
H 3	1st.	1-20-28	10 Steam down tubing 3 hrs.	3	14	20	6
J 1	1st.	2- 7-28	300	6	7	15	8
T 2	1st.	10- 9-27	125	None	170	160	D-10
Note—The well was plugged with paraffin two days before the washing so there was really not the decrease shown.							
T 2	2nd.	1-12-28	200	6	18	78	60
R 1	1st.	1-14-28	20	4	25	25	0
W 2	1st.	10-18-27	100	None	60	90	30
W 2	2nd.	1-21-28	90	6	26	44	18

Well No. D-2



Well No. C-4



bottom of the hole. However it is well to start pumping as soon as the well is ready.

The amount of water recovered after washing has been surprisingly small from the wells of the Borger Area. What relation this has to the success of the washing process we do not know.

The results of production increase are shown in the schedule of wells washed. Here is given the amount of water and the quantity of lye used. The lye was used by the case, each case containing forty-eight standard cans. The production increase is given so that comparisons may be had of conditions before and after washing.

To show plainly the length of the periods over which the washings were beneficial you will find two production curves of representative wells have been supplied. The well No. C-4 has responded the best of all. Before each washing there has been a decided drop in its production, and no other method has been found which will remedy the condition. There are several other features in these curves which are interesting, however they are well shown and need not be mentioned.

After a study of the schedule it is very evident that good results may be obtained, with no danger of hurting the well. And since it is an inexpensive operation it is worth trying before starting to clean out or abandon the well.

Summing up the problem of combatting paraffin you will see that it is only partially solved. However operating conditions have been improved and progress is being made. Yet much work along this line remains to be done if these difficulties are to be overcome in possible future fields.

New Production Between Luling and Dale

Houston.—A new oil producing territory in Caldwell County, midway between the Dale and Luling fields, and five miles south of Lockhart, has been opened through the completion last Sunday of Dr. James H. Bute's wildcat, Branyon 2, as a 2500-barrel well. It started flowing about noon Sunday, making pipe line oil which tests 35.5 gravity and registers 80 degrees temperature.

The depth of the hole is 2241 feet, but the formation from which the oil is coming is not definitely known. It is said, however, that the production is from the Del Rio, a sandy lime; and the belief has been expressed that the ultimate source of the oil is the Edwards lime, from which the Luling field is producing. The well is on a direct line with the wells of the Luling field, being about seven miles northeast of the nearest production in that field, and is about 100 feet deeper than the average depth of the Luling wells.

Although the Branyon 2 was drilled by Dr. Bute, the well and the lease on which it is located have been transferred to The Texas Company, with Dr. Bute retaining a 1/24 over-riding royalty.

Several other companies also have close-in acreage, and a more or less intensive drilling campaign is expected to follow the discovery. Humble Oil & Refining Company has about 200 acres, some being in the immediate vicinity of the well, and other holders of close-in leases include the Sun Oil Company, the Smith Oil Company, Roxana Petroleum Corporation, and the United North & South Development Company.

Magnolia Pipe Line Company is laying a line to the well. It is only one-half mile from the producer to the Magnolia line which leads out of the Dale and Lytton Springs fields to Luling.

The Texas Company Monday had started rigging up on an offset, the Medford 1, northeast of the producer; Smith et al were moving on the location for the M. E. Lancaster 1, and Detex Oil Company had made location for the Lillie August 1.

$3,000,000 Dollars Involved in West Texas Deal

FORT WORTH—The Warner-Quinlan Company of Texas, a recently organized subsidiary of the Warner-Quinlan interests of New York City, has purchased three producing properties in the Church and Fields area, West Texas district, and approximately 2,000,000 barrels of storage oil, for a total consideration of $3,000,000. Possession has been taken of the properties, and arrangements are being made to provide pipe line facilities for delivering the current production and storage oil to tank car rack at McCamey. The oil will be moved via rail to Texas City and loaded into tankers for delivery to the Warner-Quinlan Company's skimming and asphalt plant at Warners, New Jersey. The latter concern is a major distributor of gasoline in New York City and markets the Mileage brand of gasoline.

Approximately 7500 barrels of 31 to 33 gravity semi-settled production from 27 wells in the Church and Fields area was acquired by the Warner-Quinlan Company of Texas from the Eastland Oil Company and J. D. Collett-O'Keefe, Pecos Oil Company and the Church-Fields-Weekly interests. Eastland et al had eight wells located on an eighty acre lease, and approximately 990,000 barrels of crude in storage, with steel storage facilities for approximately 1,200,000 barrels, the latter property changed hands May 1. The Pecos Oil Company, which is owned jointly by Frank T. Pickrell, Carl G. Cromwell and H. Krupp, all officials of the Texon Oil and Land Company, sold the southwest quarter of Section 47, with 16 completed wells, and approximately 800,000 barrels of storage oil. Only 675,000 barrels of steel storage facilities were turned over to the Warner-Quinlan interests by Pecos Oil Company, since some of its crude is stored in leased tanks.

This sale was the first made, and became effective April 25. The Church-Fields and Weekly interests are owned jointly by George M. Church, Robert Fields, Bert F. Weekly, K. D. Harrison, Lee Davis and Pete Hoffman, and the property includes the east one-half of the southwest quarter of Section 39, being eighty acres, with three wells making about 1000 barrels natural flow daily. The above interests also had 200,000 barrels of crude in storage.

The 11 air lift units in operation on the Eastland lease were included in the deal, and all physical properties held by the three separate interests in the field have been turned to the Warner-Quinlan Company.

George, Frank and Morris Frankel, brothers, with headquarters at New York City, are the principal owners of the Warner-Quinlan Company, and the latter negotiated the Church and Fields area purchases in Fort Worth. Operations have been conducted in Texas for some years under the name of Texas Unity Oil Company, with headquarters on the second floor of the Magnolia Building, Dallas. The same headquarters will be maintained in directing the operation of the West Texas properties.

The officials of the Warner-Quinlan Company of Texas includes the following: J. C. McIntyre, Dallas, who has been in charge of Mexican properties of the parent organization until several months ago, president; W. N. Bonner, Wichita Falls, vice-president and chief counsel; and L. D. Freedman, Dallas, secretary-treasurer.

Negotiations are now pending for a pipe line outlet from the Church and Fields area to a tank car rack at McCamey to permit movement of 7500 barrels daily to the Warner's refinery, which has been operating on Mexican and Venezuelan crudes. Tentative plans are to run a line to the Marland-Hughes area, located north of the McCamey field, and connect with Marland Pipe Line Company's gathering system, and let the latter concern load the oil. If this arrangement is perfected the oil would be sent through the Marland Refining Company's Texas City export terminals, which were acquired from the Warner-Quinlan Company some years ago. Frankel Brothers are reported to be considering the purchase of one or more properties proven for deep lime production on the Howard-Glasscock County line, West Texas district, to be operated by the new subsidiary company. It is also understood that when sufficient tankage is emptied in the Church and Fields area that an effort will be made to purchase outside oil, thus giving West Texas independent producers another market outlet.

Champagnolle Activity Approaches Boom Proportions

SHREVEPORT, LA.—That the operators in South Arkansas were in the proper mood to participate in a drilling campaign upon the slightest pretext is proven by the activity that has been started in the Champagnolle area, of Union County, since compleion of the Pure Oil Company and the Magna Production Company's producers in Sections 10 and 11, of Township 17, Range 14, about 12 miles northeast of the old producing East El Dorado field. In spite of the accepted theory that this field will be found to be very treacherous, inasmuch as the producing sand from which the present wells are producing is thought by geologists to be irregular lenses in the Red Bed or Red Shale formation, approximately 25 to 30 drilling rigs have been put into operation since the two wells were brought in less than one month ago.

The Pure Oil Company's Gregory well, in Section 10-17-14, was the discovery well in the new sand in this section, being completed at 3153 feet, on April 4, and it is around this well that the greater part of the present activity centers. Ten to 15 new wells have been started in all directions, although new interest was created in the area in the vicinity of the Magnolia Petroleum Company and the Ohio Oil Company's earlier operations in Sections 1 and 2, of the same township, which is about two miles northeast. Magnolia Petroleum Company was the only company to successfully complete a well in this section of the field that did not develop salt water soon after its completion; and this well, Carroll 1, Section 1-17-14, is now flowing about 285 barrels a day, several months since its completion as a 300 barrel flowing well, and no indication of salt water has been noted. Soon after the completion of this well, considerable drilling was done upon acreage owned by the Ohio Oil Company, the greater portion of which lay in a south and west direction. Very little was done toward the north and east, as it was thought that the producing area would trend to the south and west following the failure of several wells in the opposite direction. Now, however, it seems that the north and east will be the scene of the greatest play, and both the Magnolia and Ohio companies, who own practically all of the acreage, have made locations for additional wells to be drilled on their holdings, as well as making preparations to drill locations previously made upon which work was postponed following failure of earlier wells.

The consistent manner in which both the Magna and the Pure wells continue to produce, with no sign of the salt water that has heretofore harrowed the operators in this field, is conclusive proof that an entirely new sand has been uncovered. It has been found by geologists who have watched the progress of drilling in this area, and who are familiar with its history, that this production is coming from irregular spots in the Red Shale formation; and the extent of these lenses of producing sands will remain unknown until future drilling has been done. For this reason, locations made in the field since completion of the two wells in Sections 10 and 11 have been made as close to the producing wells as will be permitted. The two producers are located within one-quarter mile of each other and the extent of this particular lense is not yet known. Therefore, as many wells as can will be drilled close in until future drilling develops the trend of production as well as the extent of the producing sand. Fifteen wells have been started in the vicinity of the Pure and Magna wells, and not any of them are more than one-half mile distant from the discovery wells.

It is thought that the greater part of the future drilling will be in a south and southeast direction from the Pure Oil Company's Gregory well, which is located about one-half mile southeast of the Magna's producing Dumas well, in Section 11, considering that the territory in all other directions is partially condemned by drilling. The Ohio and Jones wells that were drilled in Sections 1 and 2 are only one mile northeast of the Magna's Dumas wells, and production limits are established in a northeast direction by the dry hole just recently completed by Simroll et al, in Section 12, and the Oilwell Corporation's Perdue A-1, in Section 10, about one mile northwest, which was abandoned at 3047 feet, certifies that production will not extend very far in this direction. Very little drilling has been done toward the south and southeast. The acreage in this direction is held by the Magnolia, Ohio and Pure companies, principally, although it is fairly well checker-boarded by smaller concerns and individuals

Only one well has been tested since the completion of the two initial producers in the new sand in the Champagnolle field, and this one was tested at 2974 feet, which leaves some doubt as to whether or not it was completed in the same sand as were the two first wells. This well, the Magna Production Company's Rowland 2, southwest corner of the northwest quarter of the northwest quarter of Section 14-17-14, about one-half mile south of the Pure's Gregory well, was completed by setting a string of two and one-half inch tubing and a packer above 14 feet of sand that was encountered at 2960 feet, and was brought in on April 26 flowing 100 barrels of pipe line oil. This well is situated upon the same 40 acre tract as the same company's Rowland 1, recently completed at 2999 feet as a flowing well of about the same size. The Arkansas Drilling Company evidently failed to encounter this sand in its Rowland 1 which was drilled as a west offset to the Magna's Rowland 1, or passed up this pay sand in an effort to find the deeper sand from which the Pure's Gregory well is producing. This company is now drilling in red shale at 3085 feet, and it will doubtless be the first well tested in this direction.

Cotton Valley

The Trinity sand activity in the Cotton Valley field, suffered a slight set back during the week when two wells that had been watched with interest failed to come up to expectations when drilled into the Trinity depth. One of these, the Magnolia's Cole 1, Section 27-21-10, approximately two miles south of the Ohio Oil Company's discovery well, was definitely completed at 4729 feet, with an initial production of slightly less than five million cubic feet of gas a day, which was considerably disappointing in view of the fact that it was the first well to be carried to the same depth as that at which the Ohio's well was completed. Although it is about 12 to 15 feet lower on the structure than the Ohio's Bodcaw well, which was completed at 4683 feet, the opinion has been expressed that it was not drilled deep enough to encounter the deeper sand, and was completed in the first sand which has been producing this small amount of gas in the field for several months. The Magnolia probably exercised good judgment in completing the well as it did, in view of the fact that this is the farthest south deep well in the field, and the distance that separates it from the Ohio's producer in Section 15 causes it to be looked upon as a semi-wildcat. The Magnolia is now coring below 4750 feet in its Cox 1, Section 22-21-10, which is about one-half mile southeast of the Ohio's Bodcaw producer, and has had no show of an oil bearing sand down to this depth. At a depth of 4738 feet a core revealed about four inches of a hard gray sand that contained no sign of oil, and immediately below this, another core was taken of a lime formation. Operations

(Continued on page 50)

Mountain States Field Development Notes

Montana Gas Companies Consolidate

Great Falls, Mont.—The Montana-Dakota Power Company, which distributes electric power and natural gas in Eastern Montana and Western North Dakota and South Dakota, has bought the common stock of the Consolidated Gas Company, which manufactures and distributes gas at Mandan, Bismark, and Valley City. This is considered the first step toward the construction of a natural gas line across North Dakota to serve cities and towns along the line of the Northern Pacific. The gas is to be piped from the company's extensive field at Baker, Montana. The Montana-Dakota Power Company has obtained natural gas franchises at Rapid City, Lead, Deadwood, Sturgis and Spearfish and a contract involving construction of some 200 miles of gas line from the fields to the Black Hills has been let.

Oregon Basin Contract

Cody, Wyo.—Production from the Oregon Basin field in Northwestern Wyoming, developed by Cody Petroleum Company and the Ferdig interests, is reported to have been contracted at about 53c per barrel by the International Refinery at Sunburst. No information concerning the term of years covered by the contract is given out. The oil will be run through by the Illinois Pipe Line Company's line from the field to railhead at Cody, and thence by rail to Sunburst. It is said that the oil, when laid down at Sunburst, will have cost the refining company in the neighborhood of $1.50 per barrel. It is believed that this contract with the California Company will be acceptable to the U. S. Geological Survey, Department of the Interior, as the royalty owner.

Tragedy Follows Test

Great Falls, Mont.—Tragedy seems to have taken the place of bad luck at the Hardrock Oil Company's Spear 1 on Bannatyne structure, Sweet Grass Arch territory. Last week the derrick collapsed when the mast was pulled in, just before the well was about to be shot, and narrowly missed tins of nitroglycerine which were piled against the rig. This week Charles Dowittie, shooter for the Independent Torpedo Company, and Henry White, tool dresser, were killed and Henry Hulse, the driller, was badly injured by flying metal when a shot was discharged prematurely in the rig.

Location of the well is on the southwest of Section 5-25-1e, and it is the fourth commercial producer to have been brought in on the structure this spring.

Cheyenne, Wyo.—State geologist John G. Marzel says that the aniline dye tests made in the Teapot Dome wells were solely for the purpose of determining whether or not water in the Teapot Dome wells was that encroaching in the wells on the State lease in 16-39-78 in the Salt Creek field. He states emphatically that the tests were not made for the purpose of furnishing evidence for Sinclair in his conspiracy trial which closed in Washington recently. The tests were made with the consent of the navy department and the knowledge of the U. S. G. S.

Marzel says that, in his opinion pressure from Casper Mountain to the south of the Teapot reserve forces the water from Teapot into wells in the Salt Creek field; he thinks this is probably true concerning the oil in Teapot Dome.

Casper, Wyo.—State Oil & Gas Inspector Frank B. Taylor, of Casper, is reported to be applying for a patent upon the method he employed in the use of aniline dyes in testing the underground flow water and oil from the Teapot Dome to Salt Creek field. He has invented a cartridge for dyes, and he wishes to have this patented, also.

Great Falls Gas Rate

Great Falls, Mont.—The Chamber of Commerce of Great Falls has decided to hire legal counsel to wage its battle in the meeting of the public service commission at Great Falls May 2, against the Great Falls Gas Company, concerning the rate to be charged for natural gas which is being brought into the city from the Kevin-Sunburst field. The gas company recently agreed to a reduction from $2 to $1.50 for the minimum charge. It contends that until the schedule has been given a trial it is unfair to say the rates are too high and that the price the company must pay for the gas delivered by the pipe line company is such that the gas company does not feel justified in making a reduction until the rates have been tried by a period of use.

Artesia, N. Mex.—Pecos Valley Gas Company has completed its line from the Vandagriff lease to Artesia. The company is now laying city mains and the line will be ready for distribution of gas within the city early in May.

Denver, Colo.—An eastern Colorado deep test which will be watched with considerable interest by operators is that which Mentor Etnyre and associates will drill on Beacher Island structure near Wray, in Yuma County. Although the structure has always been considered favorably by geologists, operators have not drilled it because of the extreme depth of the producing sands. The first objective is mapped at 5500 feet. A number of shallow gas wells near Wray have been producing gas in commercial quantities for several years.

New York Oil Company's Affairs Finally Closed

Casper, Wyo.—Midwest Refining Company, Midwest Oil Company, and Wyoming Associated, with the Empire State Oil Company and the Forman interests, closed the transaction whereby the New York Oil Company's properties in this State were taken over by them. The Empire State Oil Company took the black oil properties, one of the Casper office buildings, and the New York Oil Company equipment; the Midwest companies took over the Salt Creek properties; the Forman interests of Chicago took over the gas properties, gas franchises, etc. All affairs of the old company were closed as of April 24.

Of all of the old directors, only Minal E. Young remains. He is a vice president of the new organization and he with Maxwell W. Winter, formerly secretary of New York Oil Company, will remain in charge of the new gas company's administration.

By the terms of the sale each stockholder of the New York Oil Company who deposited his stock with the committee received $15.85 plus 68/100 shares of Empire State Oil Company stock for each share of New York Oil. Trade for the company's assets was made through the Utilities Purchasing Corporation of New York City, the Central Trust Company, of Illinois, being made depositary for the stockholders of the New York. According to the last statement, New York Oil Company had current obligations of $204,000 with mortgage bonds totaling $1,400,000. The total assets of the company were listed at $14,367,598.

Montana Pipe Line Runs

Great Falls, Mont.—The oil and gas well division of the board of railroad commissioners for Montana reports the following pipe line runs, exclusive of those across the International boundary, for the month of February, 1928:

Kevin-Sunburst

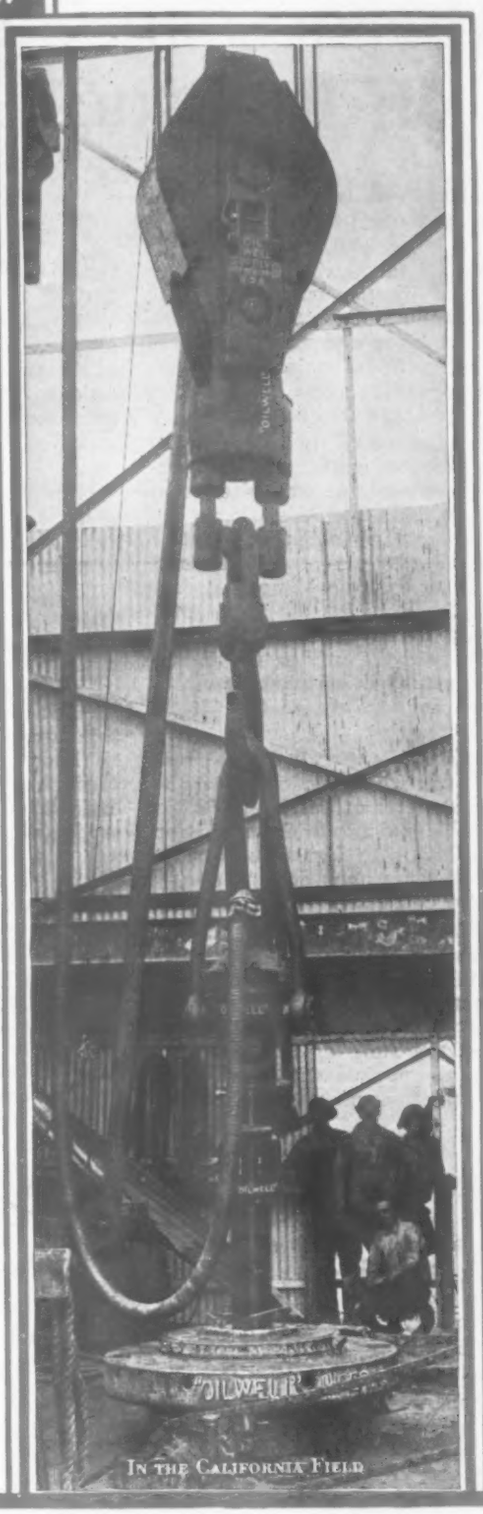
	Barrels
Illinois Pipe Line Company	228,297.63
Thurber Pipe Line Company	39,002.90
Other companies	9,104.43
Total	276,404.96

Cat Creek

Continental Oil Company	53,152.69

Casper, Wyo.—State of Wyoming's receipts from federal oil and gas royalties this year will total approximately $1,000,000. This amount is about one-half of what it was last year and one-fourth of what it was four years ago. It will mean a considerably smaller income for the State's public schools, highways and university.

"OILWELL"
ESTD. 186
TRADE MAR
(REGISTERED)



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Sheaves can be removed by pulling out the center pin without dismantling any other part of the block except removing the guards on blocks so equipped.

Made in two sizes—54-inch shell (length over-all 7 feet), and 66-inch shell (length over-all 9 feet 4 inches); and with triple, quadruple or quintuple sheaves. Also either with or without guards.

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WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

Natural Gas Business in California Depends on Residue Gas

By WILLIAM MOELLER, JR.

Read before the California Natural Gasoline Association, April 12, 1928.

THE natural gas business has to do with the production, transportation, distribution and utilization of natural gas, and while natural gas is the commodity in which we deal, the principal function of the gas company is to render an essential service to the community in supplying continuously the most efficient fuel available and ready for immediate use at all times.

The natural gas business is essentially a public utility, and as such, must obtain a franchise from the community in which it desires to do business, and also must secure from the regulating body a certificate of public convenience and necessity before it may commence operations.

After the acquirement of a franchise and the granting of a certificate of public convenience and necessity, private capital becomes a public utility and is engaged in a business that is a legalized monopoly subject to governmental regulations. These regulations do not contemplate complete management, but are supervisory in nature. However, in the final analysis, the interests of the public are superior to private property rights.

The primary object or purpose of the utility is the rendition of service, rather than the sale of a commodity. The utility is obligated, therefore, to build facilities suitable and sufficient for the performance of this service and to maintain and operate the property in a safe and adequate condition.

The utility is "entitled to receive a fair return upon the value of that which is employed for the public convenience, and it may not be required to use its property for the benefit of the public without receiving just compensation for the service rendered by it." The utility cannot expect undue or excessive returns nor returns on "ill advised investment or a losing venture." On the other hand, a utility must not be unduly harrassed and should receive sufficient return to attract good management and to establish stable credit. A fair return on the "fair value" of the property used and useful, is an incentive for building the plant and giving the service. When such a return is refused, money cannot be had for the business."

Proper Operating Costs

Since the utility is entitled to a fair return in the service of the public, the public utility should be wholly self-supporting. The payments of all operating costs should be borne by the customers for the service rendered and be reflected by the rates found fair and reasonable. Operating costs include direct labor and material expenditures sufficient to operate and maintain the properties, taxes, depreciation charges and a fair return.

In the conduct of its business, the privately owned public utility is required to pay State, franchise, local and federal taxes, and thus shares the public burden of municipal, city, State and federal governments. The costs of all city or municipal improvements are partially borne by the public utility. Street improvements of all characters obligate the utility to expenditures and results in a compensation to the public for the use of the streets and highways.

The burden of the utility is the rendition of continuous service and the readiness to serve at all times. Within reasonable limitations, the obligation of the utility is to furnish service at any and all times upon demand of any prospective consumer.

In California, the governmental regulating body, having jurisdiction over public utilities, is the California Railroad Commission. The commission in its present form was organized in 1912. By acts of the State legislature, it was given certain powers with respect to gas companies, namely:

State Powers

(1) To establish just and reasonable rates.

(2) To prescribe additions, extensions, repairs and improvements.

(3) To direct the use, in proper cases, by one public utility of a part of the property of another utility, on, over or under any street or highway.

(4) To direct the installation of safety appliances and other devices to safeguard the health and safety of employees, patrons and the public.

(5) To set up standards, classifications, and practices of gas, electrical and water corporations.

(6) To ascertain the value of the property of every public utility used and useful in public service.

(7) To establish uniform systems of accounts for each class of public utility.

(8) To permit or refuse to permit new street railroad, gas, electrical, telephone or water corporations to enter a field already served by an existing corporation of like kind.

(9) To permit or refuse to permit corporations mentioned in (8) to exercise rights under new franchises or permits.

(10) To regulate transfers of the property used in the public service of public utilities, except express corporations, wharfingers and warehousemen, and the acquisition by one public utility of stock in another public utility.

(11) To regulate and control the issues of stocks, bonds and other evidences of indebtedness of all public utilities within the State.

Having covered certain preliminary matters, we now come to the more practical problems of the gas business; namely: production, transmission, distribution, and utilization.

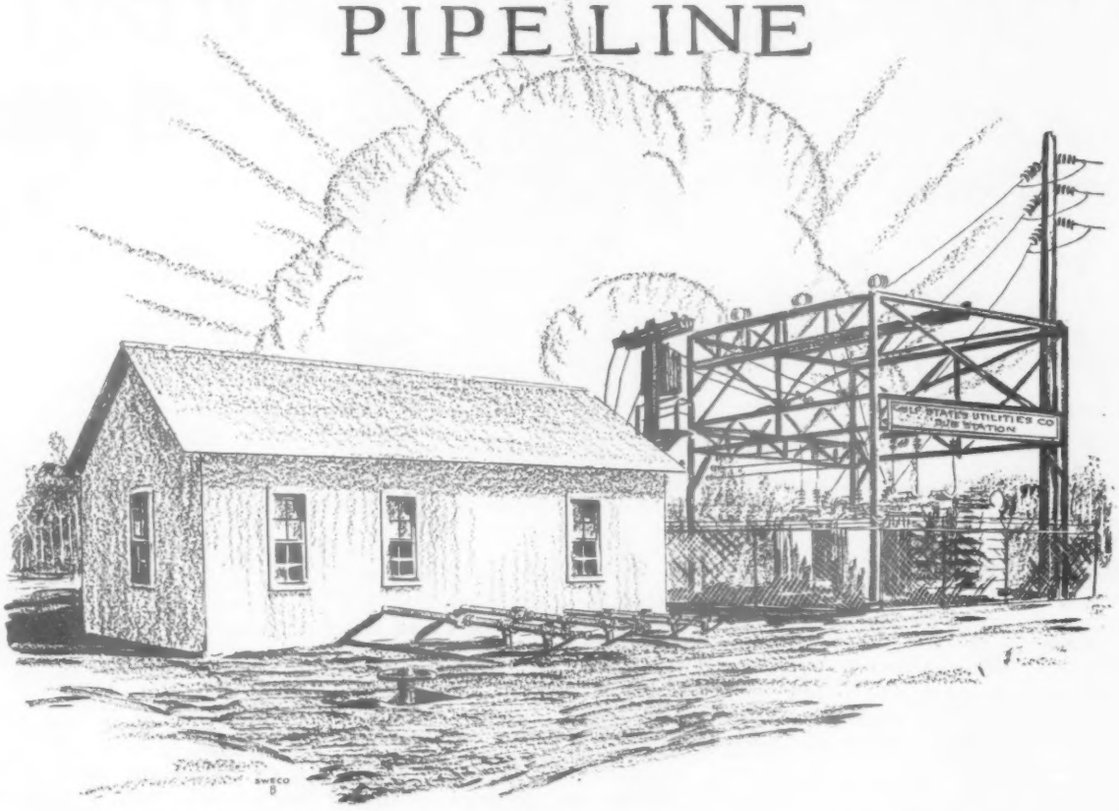
Production has to do with the available supply of natural gas, and as you all know, this may be dry gas, the product of dry gas wells, or residue casinghead gas, the by-product of oil production, from which natural gasoline has been recovered. The nature of the gas production available to any gas utility, that is, whether dry gas from gas wells, or casinghead gas from oil wells, has a decided influence on the operations of that particular utility. For example: A supply of natural gas from dry gas wells can be regulated and controlled to meet the varying demands of the market, whereas the supply of casinghead gas from oil wells is produced at practically a uniform rate over which the gas utility has little or no control, and which supply must either be used as produced, or allowed to waste, if there is no use for it at the time it is produced.

The major portion of natural gas produced in California is casinghead gas, and for that reason, a perplexing utilization problem is presented to the California gas utilities. This is contrasted to the natural gas business in the Eastern and Mid-Continent fields, where practically the bulk of natural gas production comes from gas wells, over which the utilities exercise control.

Disadvantages of Residue Gas

Where the natural gas utility derives its gas supply from gas wells, it is generally in position to regulate its market so that it supplies only the preferred business, bringing the highest average price for its product; whereas, the gas company having available primarily a supply of casinghead gas is in the position at time of excess production where it must find a market for its product in competition with other fuels. The California utility, under

"HIGHLINE" MEETS PIPE LINE



THE HIGH LINES MEET THE PIPE LINES

The Pipe lines are the arteries through which flows the life blood of the industry. And the pulse of the oil as it throbs its way from field to refinery must not falter. It is significant, therefore, that this phase of the oil industry, too, is turning more and more to the general use of electric power.

LOW FIRST COST
LOW MAINTENANCE
FLEXIBLE
DEPENDABLE
ECONOMICAL

It is further proof that where first cost, economy, and ease of operation, low depreciation and dependability are deciding factors, the decision is for electric power. It is our privilege to serve the first full-automatic, electric-powered, main pipe line station in the world.

We invite you to call upon our petroleum specialists for any assistance in the application of electric power to any phase of the petroleum industry.

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Under Executive Management of STONE & WEBSTER, INC.

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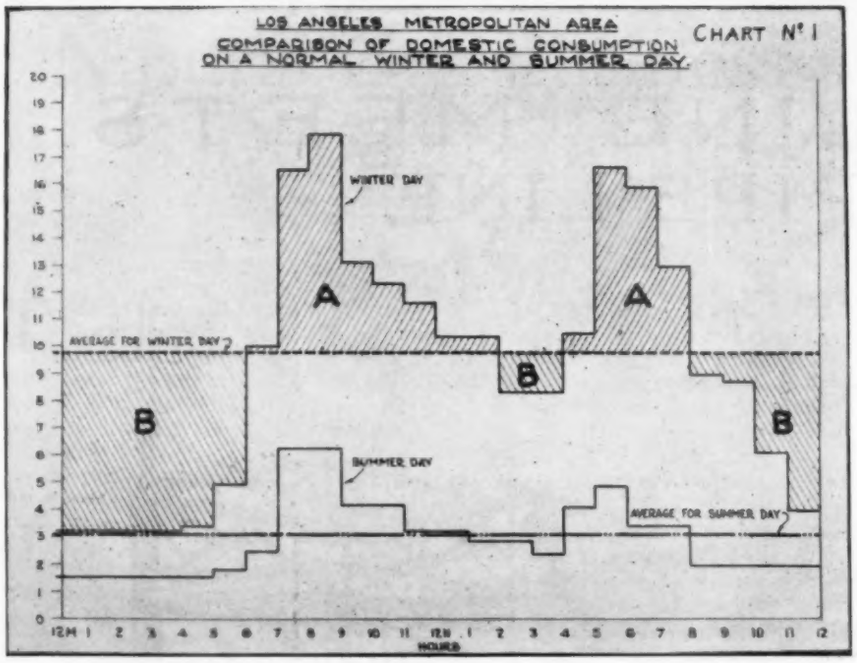

LOS ANGELES METROPOLITAN AREA
COMPARISON OF DOMESTIC CONSUMPTION
ON A NORMAL WINTER AND SUMMER DAY.
CHART N° 1
WINTER DAY
SUMMER DAY
AVERAGE FOR WINTER DAY
AVERAGE FOR SUMMER DAY
A
A
B
B
B
12M 1 2 3 4 5 6 7 8 9 10 11 12N 1 2 3 4 5 6 7 8 9 10 11 12
HOURS

Chart No. 1

such conditions, is handling a relatively larger volume of gas, which it sells at a very much lower average price. In the marketing of casinghead gas, the gas utility renders a service, not only to the consumer, but also to the producer, acting practically as the producer's agent in finding a market for his excess gas production.

When the supply of casinghead gas becomes insufficient to meet the gas utilities' requirements, it becomes necessary to use dry gas from gas wells to make up the shortage, and where this supply is limited, as is the case in California, the gas utility may find itself in the embarrassing position of not having sufficient gas to meet its requirements.

To guard against this situation, the gas utilities maintain gas manufacturing plants, in which so-called "oil-gas" can be manufactured from oil. These manufacturing plants are primarily used as "stand-by" plants to take care of emergencies, caused by breakage of natural gas transmission mains supplying various distribution districts, and also to meet peak load requirements. In case of a shortage in the supply of natural gas, the service to industrial consumers is reduced or cut off.

The compression and transmission of natural gas is a subject with which you are all familiar, and I will not discuss it other than to say that the maximum pressure used for transmission of gas in California is about 400 pounds, and that welded pipeline construction is uniformly used; whereas, in the East, many pipe lines are operated with maximum pressures of 300 to 350 pounds, and coupler construction, using plain end pipe, is still very generally used.

In the distribution of gas to the consumers, both low pressure and "intermediate" high pressure systems are used. In the intermediate high pressure system of distribution, smaller distribution mains are required by reason of high pressures, maintained therein, and individual house regulators are installed at each service or meter in order to reduce the gas pressure to about eight inches of water for proper utilization in house appliances. In the low pressure distribution system, relatively larger mains are required and no individual house regulators are needed in the service or house meter, because gas is distributed at sufficiently low pressure to properly serve house appliances. In the distribution of natural gas, the high pressure system is generally used, because gas is available at higher pressures at the distribution center, thus obviating the need of compressing gas, as would be the case when manufactured gas is used. The economy in high pressure distribution is in the smaller investment in mains required for distribution.

The most essential use for gas is to supply the so-called domestic requirements: that is, to supply fuel for heating and cooking in the home. In addition to this essential service, gas is also used in practically every field of industry where fuel is required.

Meeting Varying Demand

The major problem of the natural gas industry is to have available in its distribution system sufficient gas at all times to meet the requirements of all of its consumers. To better discuss this problem, two charts have been prepared, showing typical load conditions.

Chart No. 1—shows the hourly load of the domestic consumption on an average summer day, and the same for an average winter day. As already pointed out, the supply of casinghead gas available to the gas utility is produced at a fairly uniform hourly rate throughout each day, and in order to meet the varying hourly requirements, (as set forth on these charts), for any day, it becomes necessary for the gas utility to provide storage, or holder capacity conveniently located to distribution centers, in which gas can be stored during the hours of minimum consumption, and withdrawn during the hours of maximum requirement. If it were possible to exactly balance supply and consumption by using storage holders, the rate of in-put into the transmission system of the gas utility would be uniform each hour, and would equal the average of the daily requirement as indicated by the aver-

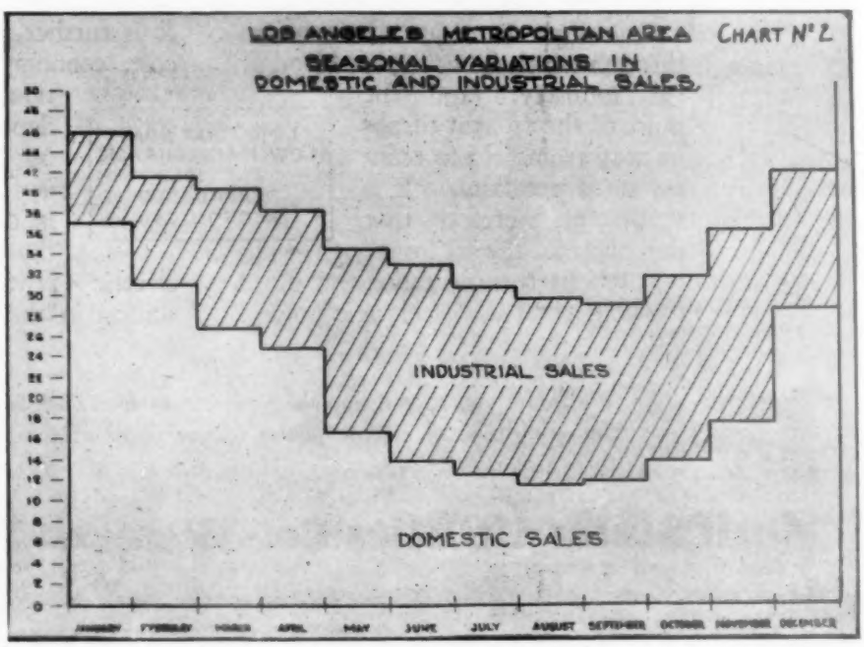
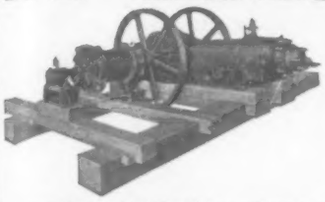


Chart No. 2

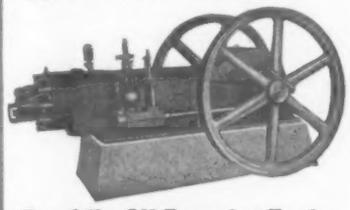
FRANKLIN VALVELESS OIL AND GAS ENGINES

"The Desert of Sahara Would Satisfy My Franklin"

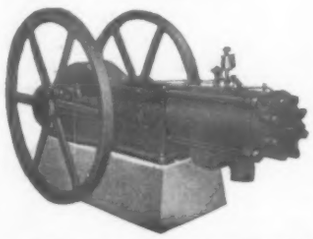
IT DRINKS SO LITTLE WATER



Franklin Oil Drilling Engines
are sold complete with self-oiling reversible drilling clutch.
Size for Mid-Continent and Western Service. Price $3,700. Sizes for Eastern Service, $2,600.00 and $3,350.00 F. O. B. Franklin, Pa.



Franklin Oil Pumping Engine
This light running mate to the drilling engine will do your swabbing and pumping at an even lower cost. H. P., 30, 40, 50 and 75. Can be equipped with one way or reversible Pumping Clutch.
Prices on request.



Franklin Gas Pumping Engine
Similar in construction design as the gas drilling engine and interchangeable on the same block with it. You can either leave your drilling engine on the job for pumping or replace it with one of these lesser horse power Franklins without changing a single bolt.
Prices on request.

Talking of "Water" Read What Others Have to Say About it

"It has not only saved us money on water and oil, but uses so much less water that in case we are drilling in a locality where there is a water shortage it saves shutting down the well. The Franklin Oil Engine has proved to be very economical.

Yours very truly,

(Signed) SHAWVER & SUTTER

By: Bell

Where gas is available here's the logical power plant for you—the Franklin Valveless Gas Drilling Engine. In principle it is exactly like its oil burning brother with the added advantage of interchangeability.

When the owner of a Franklin Oil Engine goes into a field where gas is cheap, he converts his oil engine in two hours—simply by changing cylinder heads and replacing full pump with magneto.

Whether you use the oil burning or the gas burning Franklin you save money. Fuel, water and lubrication costs shrink. Some users tell us they are saving as much as $20.00 to $30.00 per day on their Franklins.

FRANKLIN VALVELESS ENGINE CO.
Franklin, Pa.

Franklin Gas Drilling Engine
Sizes for Mid-Continent and Western Service, $1,725.00 and $2,150.00. Eastern Service, $1,450.00 and $1,725.00 F. O. B. Franklin, Pa.

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Branch Stores in All Oil Fields

age line on the chart. Since this is not always possible by reason of hourly load fluctuations which cannot be anticipated, it often becomes necessary to modify the hourly rate of in-put into the transmission lines. The transmission lines can be used, and are used to a limited extent, as storage capacity, but the primary use of the transmission system is for the transmission of gas, and not for the storing of gas.

Chart No. 2 shows the average monthly domestic load and the average monthly industrial load for a year, and indicates the seasoned variation in the total load.

As already pointed out, the domestic business is the essential business of the gas utility, and this requirement must necessarily have preference over the industrial load.

Therefore, the ideal situation for the gas utility would be one in which an unlimited industrial load is available, which could be turned on or off at will, so that at times of maximum demand of the domestic consumers, the industrial load could be curtailed to the extent necessary, and at times of minimum demand of the domestic consumers, the industrial load could be correspondingly increased. In actual practice, however, conditions are very far from ideal, and we find that the industrial consumer objects to being shut off, since this means that he must use other fuels and must necessarily maintain duplicate burner equipment. Furthermore, interruption in natural gas service interferes in many instances with the consumer's plant operation.

Industrial Rates

The supply of natural gas available to the gas utility and the requirements of the preferred consumers regulates the gas supply available for industries. As there can be no assurance that the total industrial requirements will always be satisfied, it becomes necessary to offer the industrial consumer, subject to shut off, a rate sufficiently attractive to offset the objectionable features of this class of service. The ability of the natural gas utility to meet this condition depends upon economic conditions.

The variation in seasoned demand cannot be taken care of by storage or holder capacity, and the only solution is to regulate the in-put into the transmission system to balance the seasonal demand, and it is for this reason that the gas utility in California usually finds it necessary to curtail the amount taken in the various fields during the summer months.

The gas utility must continue to serve gas to its consumers year after year, and is vitally concerned with the future of natural gas production. To acquire knowledge as to future trends, it must collect, compile and study natural gas production statistics. Where natural gas production comes from gas wells the problem is not so difficult because dry gas reserve can be approximated, computed, and checked from time to time, but where the gas utility depends on cansinghead gas for its supply the problem is difficult by reason of the many uncertain and variable factors involved. For example, the oil company may change its method of operating oil wells, thereby changing the rate of gas production, and further, the oil company having prior call on gas it produces, may find added uses for its gas in its business. This results in a smaller amount available to the gas utility. The latter tendency is much in evidence today and it is only by the closest cooperation between the oil and gasoline companies and the gas utilities that the natural gas industry can secure the needed production information to guide it in its future development. This cooperation is also necessary to enable the natural gas industry to render the best service to the producer in securing for him the greatest possible market for natural gas, and also to render the best service to the consumer.

N. C. McGOWAN

Chairman of the Natural Gas Department of the American Gas Association, who will preside over the annual meeting at Dallas.

Champagnolle Area Activity Approaches Boom Proportions

(Continued from Page 43)

are being continued on this well, and the owners have reported that it will be carried to a sufficient depth to either secure production or be drilled into salt water. The Louisiana Oil Refining Corporation is coring below 4650 feet in its Davis 1, Section 23, which will be the first well to reach the deep producing depth in this section of the field. It should reach an interesting depth during the week.

There are now about 25 drilling rigs in operation in the Cotton Valley field, all of them being drilled to the Trinity sand, and indications are that it will require only the completion of a second producing well similar to that of the Ohio's, to start a real drilling boom. The Bodcaw producer continues to flow around 3000 barrels a day, and has produced approximately 100,000 barrels of oil. It is showing a steady decline in production now, dropping off at the rate of about 125 barrels daily. The Ohio Oil Company is proceeding with the drilling of three additional wells upon its lease on which the producer was completed, having started one well in the center of each of three 40-acre leases that, including the 40 upon which the producing well is located, comprise the south one-half of its 320 acre lease of one solid tract in Section 15. The Woodley Petroleum Company is preparing to deepen its Cox B-1, in Section 23-21-10, after having cemented it back to 4590 feet from 4737 feet, where it was tested as a small gas well with a show of oil.

Very little interesting news emanated from wildcat sections of the two States during the past week, possibly the most important event being the resumption of wildcat activity in the vicinity of Winnfield, in Winn Parish, which has been the center of a great deal of interesting wildcat drilling during the past several years. Two new wells have recently been started in this vicinity, the first being that of Hollyfield and McFarlane, to be drilled in Section 19-11-3, and the second to be drilled by the Calvin Oil Company, in Section 9-11-4.

The Texas Company tested salt water in its Meyer wildcat, in Section 15-22-7e, Morehouse Parish, at 2537 feet, when it was bailed during the week.

The Palmer Corporation is preparing to set casing for a test of one foot of gas rock in its O'Brien 1, in Section 7-19-11, East Carroll Parish, at 2350 feet.

Super-fast

— yet always super-safe

OIL WELL DUNN TOOLS

DUNN
MANUFACTURING COMPANY
OXNARD, CALIFORNIA

Mid-Continent Branch Factory
Export Sales Office

DUNN SAFETY *means* DONE SAFELY

age line on the chart. Since this is not always possible by reason of hourly load fluctuations which cannot be anticipated, it often becomes necessary to modify the hourly rate of in-put into the transmission lines. The transmission lines can be used, and are used to a limited extent, as storage capacity, but the primary use of the transmission system is for the transmission of gas, and not for the storing of gas.

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DUNN Safety AUTOMATIC SPRING HOOK

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Made in a variety of sizes to meet every requirement of the safe and fast handling of rods and tubing

Any size sent prepaid for trial without obligation.

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OIL WELL DUNN TOOLS

DUNN SAFETY *means* DONE SAFELY

Skyline View of Dallas, "The Gas City"—Unmarred by Smoke and Soot

Plans All Made for Gas Men At Dallas

Program deals with subjects of paramount interest to natural gas industry and exhibits are larger than ever before

DALLAS, TEXAS. — With all plans practically completed, officials of the American Gas Association and of the Natural Gas Department are awaiting with interest the convention which is to be held here May 7 to 10, inclusive.

N. C. McGowen, chairman of the Natural Gas Department, predicts the greatest gas meeting ever held, in the Dallas gathering. He says, "Just as the past year has been one of the most important the organized natural gas industry of America has ever witnessed, so will the coming Dallas convention be the most outstanding meeting ever held."

In connection with the program, Mr. McGowen stated, "The program will deal with subjects of paramount interest to the entire natural gas industry. The exhibition will be a record-breaking one in every sense of the word—it will be larger and better than ever before because the past year has seen remarkable developments on the part of our manufacturer companies. The entertainment will be of the high quality that natural gas men are used to."

All indications point to the most comprehensive exhibit that has yet featured at a natural gas convention. Practically all the space allotted to manufacturers has been reserved. Included in the list of exhibitors are many who have never taken space at natural gas meetings before. The exhibit will be in the Manufacturers building. In this building ample space is available and manufacturers will have the opportunity to show their products under the most favorable conditions.

H. C. MORRIS

Chairman of the Arrangement Committee for the Dallas Convention; vice-president and general manager of the Dallas Gas Company, and member of the advisory committee of the American Gas Association.

The list of speakers for the business sessions is an impressive one and includes outstanding names in the gas industry.

The subjects covered are timely and of widespread interest.

Dallas a Gas City

It has been pointed out that it is particularly fitting that the convention be held in Dallas since Dallas is a gas-made city. Within two decades the city has sprung from a town to a metropolitan city and the availability of natural gas has had much to do with this growth. To what extent gas is used in Dallas is pointed out in the American Gas Association Monthly, for April: "When delegates come from far and near to what will undoubtedly be a record-breaking convention," it says, "they should feel right at home. Their hotel will be a gas hotel from cellar to garret, and all buildings in which they will hold their meetings and their exhibits will be gas-heated, and the food they eat will be

***For the Gas Industry*— especially designed, sturdy fishing tools, obtaining open holes under abnormally high gas pres-**

HONEST

sures and fluid conditions —retaining maximum wall thickness—the increased factor of safety.

TOOLS

We cordially invite you to visit our booth, No. 515, at the Annual Meeting and Exhibition of the Natural Gas Department, American Gas Association, in Dallas, May 7, 8, 9 and 10.

HINDERLITER

Say you saw it in The OIL WEEKLY

gas-cooked. The street cars they ride will be run by electricity made by gas heat."

Governors and public utility commissioners from leading natural gas states of the country have been invited to attend the convention.

Convention committee chairmen report that their committees are working hard and enthusiastically to make the meeting the success it should be.

Provisions are being made to take care of at least 1000 delegates to the meeting.

Entertainment

Complimentary luncheons will be served every noon in the Manufacturers building, carrying out the tradition long established by the supply men's association. In addition there will be a vaudeville and smoker at the Hotel Adolphus on the evening of May 8. The latest bulletin on this affair says: "Good smokes and eats, music, songs, movies, dances, posing, battles royal and a general good time."

The annual banquet will be held Wednesday evening, May 9. The speakers at this function will include Governor Dan Moody of Texas; Judge C. B. Gilmore, chairman of the Railroad Commission of Texas; Oscar H. Fogg, president of the American Gas Association; H. O. Caster, of New York; Karl F. Griffith, Dallas, and J. J. Taylor of the Dallas News.

The exhibition committee is asking that members of the American Gas Association ask their representatives who attend the convention, to make the exhibition hall their headquarters, and also that in the interest and appreciation of the exhibitors a good attendance be maintained throughout the period of the exhibition.

The tentative program for the convention follows:

The Adolphus—Convention Headquarters

Monday—May 7

9:00 a.m.—Opening of Exhibition of Appliances and Apparatus in Manufacturers' Building, Texas Fair Grounds.

10:30 a.m.—Meeting of the Main Technical and Research Committee and Subcommittees, Rooms 629 and 656, Hotel Adolphus.

12:00 Noon — Complimentary Luncheon will be served in the Manufacturers' Building, Texas Fair Grounds.

4:30 p.m.—Meeting of the Managing and Advisory Committee, Natural Gas Department, Room 630, Hotel Adolphus.

6:30 p.m.—Dinner of the Managing and Advisory Committees, Natural Gas Department, English Room, Hotel Adolphus.

Tuesday—May 8, 10:00 a. m.

Opening of Annual Meeting, Natural Gas Department, Auditorium, Texas Fair Grounds.

Call to Order—N. C. McGowen, Chairman, Natural Gas Department.

Invocation—

Address of Welcome—

Response—Christy Payne, President, Hope Natural Gas Co., Pittsburgh, Pa.

Address of the Chairman—N. C. McGowen, vice-president, The Palmer Corp., Shreveport, La.

Appointment of Committee on Chairman's Address—S. W. Meals, vice-chairman, Natural Gas Department.

Report of Memorials Committee—

Address—O. H. Fogg, President, American Gas Association.

Paper—"The History and Problems of the Natural Gas Industry in California"—(Author to be announced).

Address—Alexander Forward, managing director, American Gas Association.

Paper—(Title to be announced), R. M. Conner, director, American Gas Association Testing Laboratory.

12:00 Noon

Complimentary Luncheon, Manufacturers' Building, Texas Fair Grounds.

2:00 p. m.

Second Session, Auditorium, Texas Fair Grounds

Report — Wrinkle Committee — H. J. Struth, Chairman, Cincinnati, Ohio.

Paper—"Employees' Performance in the Natural Gas Business"—R. W. Hendee, Oklahoma Natural Gas Corp., Tulsa, Okla.

Paper—"Why a Gas Company Should Merchandise and How"—T. L. Phillips, Union Gas & Electric Co., Cincinnati, Ohio.

Informal Addresses

Wednesday—May 9, 10:00 a. m.

Third Session, Auditorium, Texas Fair Grounds

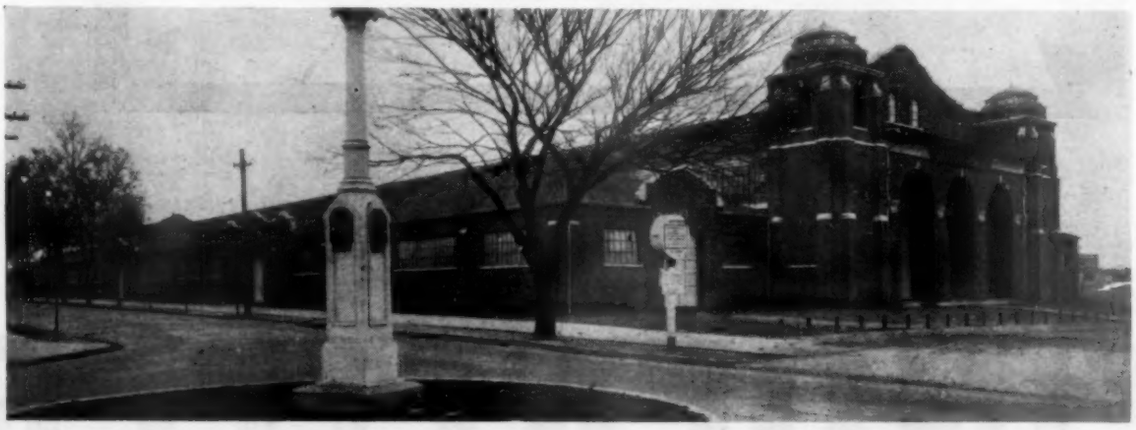
Paper—"Limiting Factors for Natural Gas Projects"—P. McD. Biddison, Gas Producing Co. of Louisiana, Bastrop, La.

Paper—"Pipe Corrosion and Protection" by W. G. Hagan, The East Ohio Gas Co., Cleveland, Ohio.

Question Discussion — Discussion of ten questions, with J. D. Creveling, Henry L. Doherty & Company, New York, N. Y., acting as chairman.

(Titles of Questions to be announced)

(Continued on Page 62)



Manufacturers' Building at Texas State Fair Grounds, where the Natural Gas Appliance Exhibits will be located

List of Exhibitors

Natural Gas Department Exhibition

	Booths
A-B Stove Company, Battle Creek Mich.	341
Allen Manufacturing Company, Nashville, Tenn.	539
American Gas Products Corporation, New York	512, 514
American Heater Corporation, St. Louis	204
American Schaeffer & Budenberg Corporation, Brooklyn	430
The Arco Company, Cleveland	422
Barber-Greene Company, Aurora, Ill.	109
Barco Manufacturing Company, Chicago	335
Beckwith Company, Dowagiac, Mich.	125, 127
Birmingham Stove & Range Co., Birmingham, Ala.	101-A
B-Line Boiler Co., Cleveland	131
Bridge & Beach Manufacturing Co., St. Louis	233
Bristol Company, The, Waterbury, Conn.	210, 212
Bryant Heater & Manufacturing Co., The, Cleveland	203
Browning Ferris Machinery Company, Dallas	107
The Chaplin-Fulton Manufacturing Company, Pittsburgh	336
Clark Brothers Company, Olean, N. Y.	206
George M. Clark & Company, Chicago	305, 307
The Cleveland Gas Burner & Appliance Co., Cleveland	230
The Cleveland Heater Company, Cleveland	115
The Cleveland Trencher Company, Cleveland	502, 504
James B. Clow & Sons, Chicago	133
Columbus Heating & Ventilating Co., Columbus, Ohio	241
The Connersville Blower Company, Connersville, Ind.	600-A
The Continental Supply Company, St. Louis	308, 310
Crane Company, Chicago	418, 420, 519, 521
Cribben & Sexton Company, Chicago	126
Cutler-Hammer Manufacturing Company, Milwaukee	535
Dallas Foundry, Dallas	220
Dangler Stove Company, Cleveland	631
Darling Valve & Manufacturing Co., Williamsport, Pa.	214
Dearborn Chemical Company, Chicago	518
Detroit Stove Works, Detroit	337
S. R. Dresser Manufacturing Co., Bradford, Pa.	309, 311
The Estate Stove Company, Hamilton, Ohio	431, 433
The Fisher Governor Company, Marshalltown, Iowa	520
The Foxboro Company, Foxboro, Mass.	424, 426
Frick-Reid Supply Company, Tulsa	531
General Gas Light Company, New York	117, 119
Gillespie & Schwan, Inc., Dallas, Houston, San Antonio	130, 132
J. H. Grayson Company, Athens, Ohio	234
Guardian Gas Appliance Company, Cleveland	235, 237
Hays Manufacturing Company, Erie, Pa.	616
W. K. Henderson Iron Works & Supply Co., Shreveport, La.	113
Hill, Hubbell & Company, Tulsa	231
Hinderliter Tool Company, Tulsa	515
Home Incinerator Company, Milwaukee	205
Hope Engineering & Supply Co., Mt. Vernon, Ohio	524, 526
Hotstream Heater Company, Cleveland	232
Huey & Philp Hardware Company, Dallas	124
Ingersoll-Rand Compan yof Texas, Dallas	103, 105
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The Tabulating Company Division	
International Time Recording Company Division	
Dayton Scale Company Division	
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Johns-Manville Corporation, New York	227
Koppers Construction Company, Pittsburgh	338
P. M. Lattmer Manufacturing Company, Cedar Rapids, Iowa	226
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Lone Star Gas Company, Dallas	211, 213
Ludlow Valve & Manufacturing Co., Troy, N. Y.	527
Lunkenheimer Company, Cincinnati, Ohio	207, 209
Metric Metal Works, Erie, Pa.	411, 413, 415
Lee B. Mettler Company, Los Angeles	440
Michigan Stove Company, Detroit	339
Minneapolis-Honeywell Regulator Co., Minneapolis	533
Moore Brothers Company, Joliet, Illinois	434
Mueller Company, Decatur, Illinois	319, 321
National Supply Company, Toledo	404, 406
National Tube Company, Pittsburgh	323, 325, 327
Natural Gas Magazine, Cincinnati	505
Naylor Spiral Pipe Company, Chicago	523
New Process Stove Company, Cleveland	538
The Oil Well Supply Company, Pittsburgh	313, 315
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Payne Furnace & Supply Company, Inc., Beverly Hills, California	141
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Safety Gas Main Stopper Company, Brooklyn	225
Sala Heater & Mantel Company, Dallas	331, 333
Servel Sales, Inc., Evansville, Indiana	435
M. B. Skinner Company, Chicago	432
J. B. Slattery & Brother, Inc., Brooklyn	111
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Southwestern Engineering Corporation, Los Angeles	223
Southwestern Pipe Joint & Engineering Company, Birmingham, Ala.	218
Spencer Thermostat Company, Cambridge, Mass.	530
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Troop Water Heater Company, Pittsburgh	129
United States Cast Iron Pipe & Foundry Company, Burlington, N. J.	600
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Wailes Dove-Hermiston Corp., Tulsa, New York, Houston	508, 510
Walworth Company, Inc., New York	405, 407
Ward Heater Company, Los Angeles	332
Waukesha Motor Company, Waukesha	102
Webster Engineering Company, Tulsa	239
Westcott Valve Company, Inc., East St. Louis, Ill.	306
Westcott & Greis, Inc., Tulsa	409
Western Gas Magazine, Los Angeles	304
West Park Foundry Company, Cleveland	208
Worthington Pump & Machinery Corporation, Buffalo, N. Y.	215
A. M. Lockett & Company, Ltd.	

THE MARION LINE

MARION EQUIPMENT

SUCKER ROD SHOCK ABSORBER

(Patented)

The Swivel Joint Sucker Rod Shock Absorber (Patented) is designed to prevent sucker rods from becoming separated while being lowered into the well and also to prevent the working valve from wearing in the same place. It also absorbs the shock and jar of the rod to which it is usually subjected when brought into contact with the fluid.

To absorb the shock and jars of the rod incident to its contact with the fluid in the well, a coil spring is arranged within the body portion, having one end bearing against the adjacent end of the swivel rod, while the other extremity of the spring rests upon the adjacent end of the body.

It is the rotary type absorber which permits the cups to turn in the working barrel.

The friction of the traveling valve against the tubing when lowering the rods into the well often causes the rods to part; the shock absorber being swivel or rotary type permits the plunger to turn and the rod to work free.

This absorber takes a great strain off the rods and the breaks do not occur so often.

Write for Bulletin No. 170C

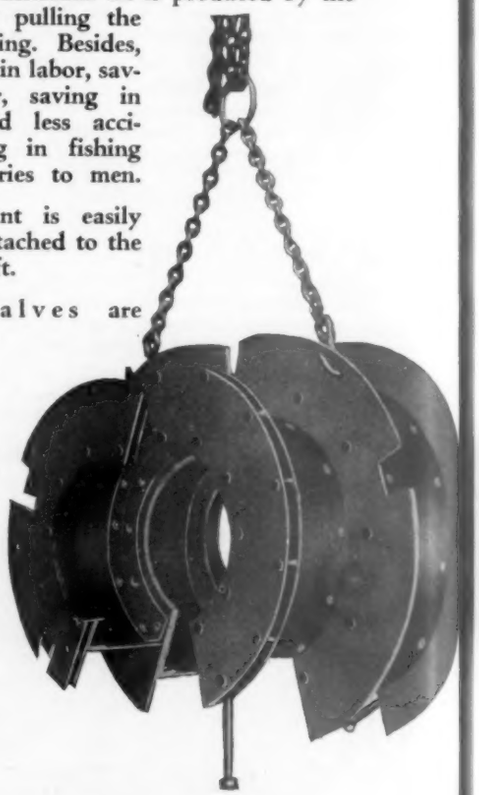
MARION-DYER SPEED SPOOL

The Marion-Dyer bull-wheel speed attachment (patented) consists of a two diameter drum that is attached to the bull-wheel shaft to increase the diameter of the shaft to approximately one and one-half and two times the shaft diameter. Its purpose is to speed up the pulling of tubing and rods. It gives power to pull heavy loads and speed as the load lightens.

With this attachment, the maximum pulling speed is attained without speeding up the engine. Much additional oil is produced by the time saved in pulling the rods and tubing. Besides, there is saving in labor, saving in power, saving in equipment and less accidents resulting in fishing jobs and injuries to men.

The attachment is easily and readily attached to the bull-wheel shaft.

The two halves are hinged together on one side and handled by means of a chain which automatically opens the two halves so they will drop over the shaft readily. Write for Bulletin No. 44A.



THE MARION LINE

Marion Machine, Fou

Marion, In

Say you saw it in The OIL WEEKLY

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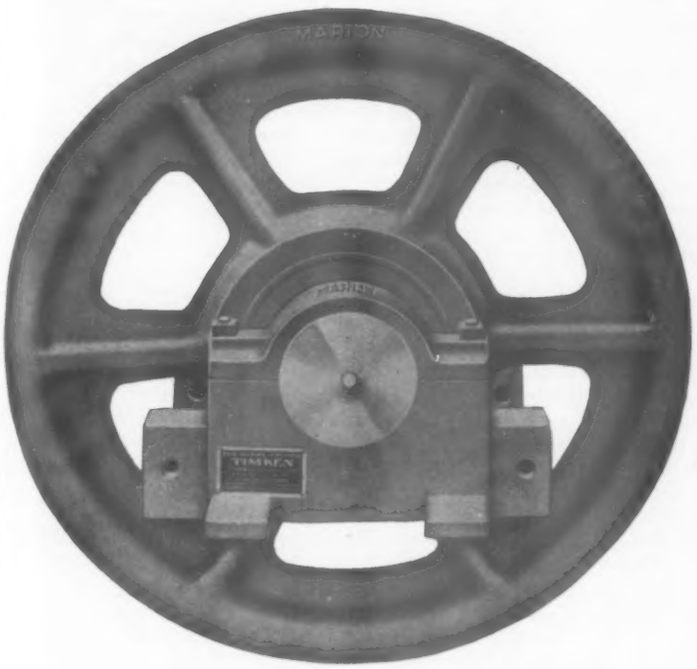
THE MARION LINE



MARION ROLLER BEARING SHEAVES

The Marion Roller Bearing Crown Block Sheaves are for use on steel crown blocks in connection with deep drilling where the loads are heavy and high speeds are necessary.

The sheaves have the following advantages over the standard sheaves:

Equipped with Timken Roller Bearings; Low friction loss; Will carry very heavy loads; Operate at high speeds; Require very little attention for oiling; Very simple adjustment to bearings; Can be attached to almost any steel crown block; Fitted with either manganese or steel; All pulleys have A. P. I. standardized diameters and grooves; Takes no more space than a standard pulley and bearings.

Write for Bulletin No. 28A

SUPER-SERVICE SUCKER ROD

Ordinary Steel will not hold up under the increased loads and other changed conditions in oil production in deep territory, therefore the Marion Super-Service Sucker Rod was designed to overcome as nearly as possible, breakage caused from fatigue and other sources.

"Super-Service" Sucker Rods are built to withstand the shocks, vibration, and severe strains now put on sucker rods.

The steel used in Marion Super-Service Sucker Rods has the physical and chemical properties which enables them to withstand the repeated application of very heavy loads—having a yield point MORE THAN TWICE THAT OF MILD STEEL AND A RESISTANCE TO FATIGUE OF MORE THAN TWICE that of mild steel such as used in sucker rods.

The ends are upset and they have the long tapering shoulder. The upset ends are forged at the proper temperature to give greatest strength. They are one piece solid construction.

Made both in box and pin types. The boxes and pins are threaded to perfect alignment with body of rod.

These rods are recommended for wells where the standard sucker rods will not give service. They are correct in design, construction, quality and efficiency and are a better rod for oil country work.

Manufactured according to A. P. I. specifications.

Write for Bulletin No. 168A.

oundry & Supply Co.
Indiana

THE MARION LINE

How to Calculate Friction Loss for Flow of Gas in Pipes

By H. L. KAUFFMAN

THE growing use of the air and gas-lift as a means of increasing the amount of oil obtained from a producing field has brought an additional amount of work to the pipe-line engineer, as well as many new problems. With engineering books and data available, these new difficulties are usually overcome without great difficulty.

Such engineering and operating problems as are encountered in the transportation of natural gas in pipe-lines are closely allied with those met in transporting liquid petroleum hydrocarbons. Laws that govern the flow gas through orifices and lines are well-established, and when it is known what a line will do with one kind of gas under certain conditions, it is easy to find out what the line will do with any other gas. As in the case of the transportation of fluids, so too in moving gas we have a loss of head due to the friction of the gas moving along the pipe.

Sometimes the production or field superintendent is required to solve some problems that are not quite within his own department and, as an example, let us assume a condition wherein the superintendent wants to know how to arrive at the amount of frictional loss in a pipe-line used for transporting gas. How shall the information be obtained?

It is to answer this question that the present article, with accompanying formulas and charts, is given.

In determining the friction loss for long pipes, assuming the transportation of a gas having a specific gravity of 0.5, the following formula is applicable:

$$q = 44.72 d^{5/2} \sqrt{\frac{P - 14.7}{l g}}, \text{ where}$$

q=Cubic feet per minute.
d=Diameter of pipe in inches.
P=Absolute initial pressure.
l=Length in feet.
g=Specific gravity as compared with air.

Figure 1 gives the loss for 1,000 feet of pipe, when conveying gas of 0.5 specific gravity. This table can not be used alone except when transporting gas of this particular gravity in a pipe exactly 1,000 feet in length.

Now when the frictional loss for 1,000 feet of pipe has been found in Figure 1, next look for the total length of pipe in feet in Figure 2 and project over to loss line horizontally and then vertically for the total frictional loss.

For air, double the length of pipe before taking the reading in Figure 2.

For any other specific gravity, multiply the length by twice the specific gravity and then make use of Figure 2, but first making use of Figure 1 in the usual way.

If the terminal pressure is not 14.7 pounds per square inch, or atmospheric, then find the number of lineal feet on the chart represented by Figure 2 corresponding to the terminal pressure above atmospheric, add this to the lineal feet of pipe to be used and read to loss line obtained from Figure 1 in the usual manner.

In determining the friction loss for short lengths of pipe, that is, for ordinary local distribution of gas, here also assuming the transportation of a gas having a specific gravity of 0.5, the chart represented by Figure 3 is applicable.

The data represented by this chart were obtained by the use of the following formula:

$$q = 21 d^{5/2} \sqrt{\frac{h}{s l}}$$

This is the same as:

$$q = 1260 d^{2} \sqrt{\frac{d h}{s l}}, \text{ where}$$

q=Cubic feet of gas per minute.
d=Diameter of pipe in inches.
h=Pressure in inches of water.
s=Specific gravity as compared with air.
l=Length in yards.

In the above-mentioned formula, "l" equals 100 yards and "s", 0.5 specific gravity.

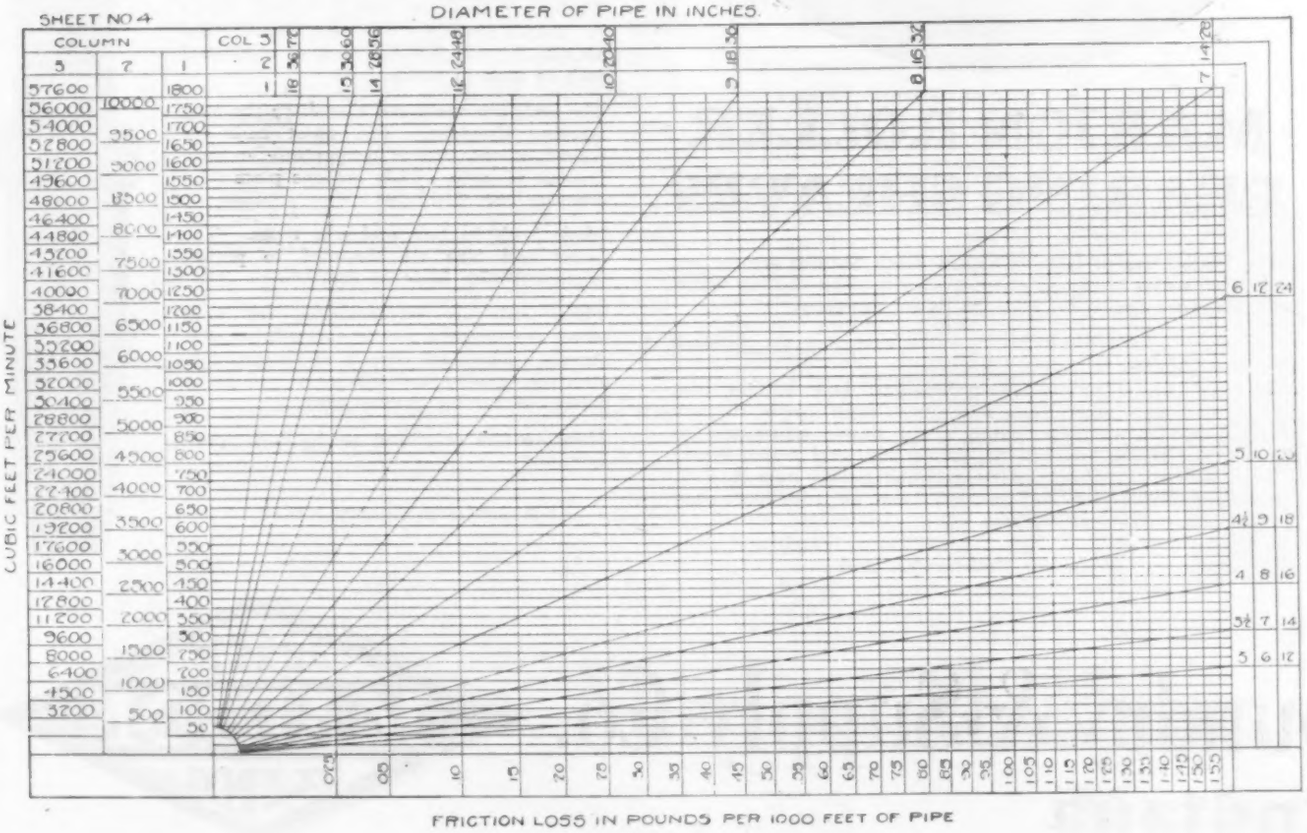


Figure 1

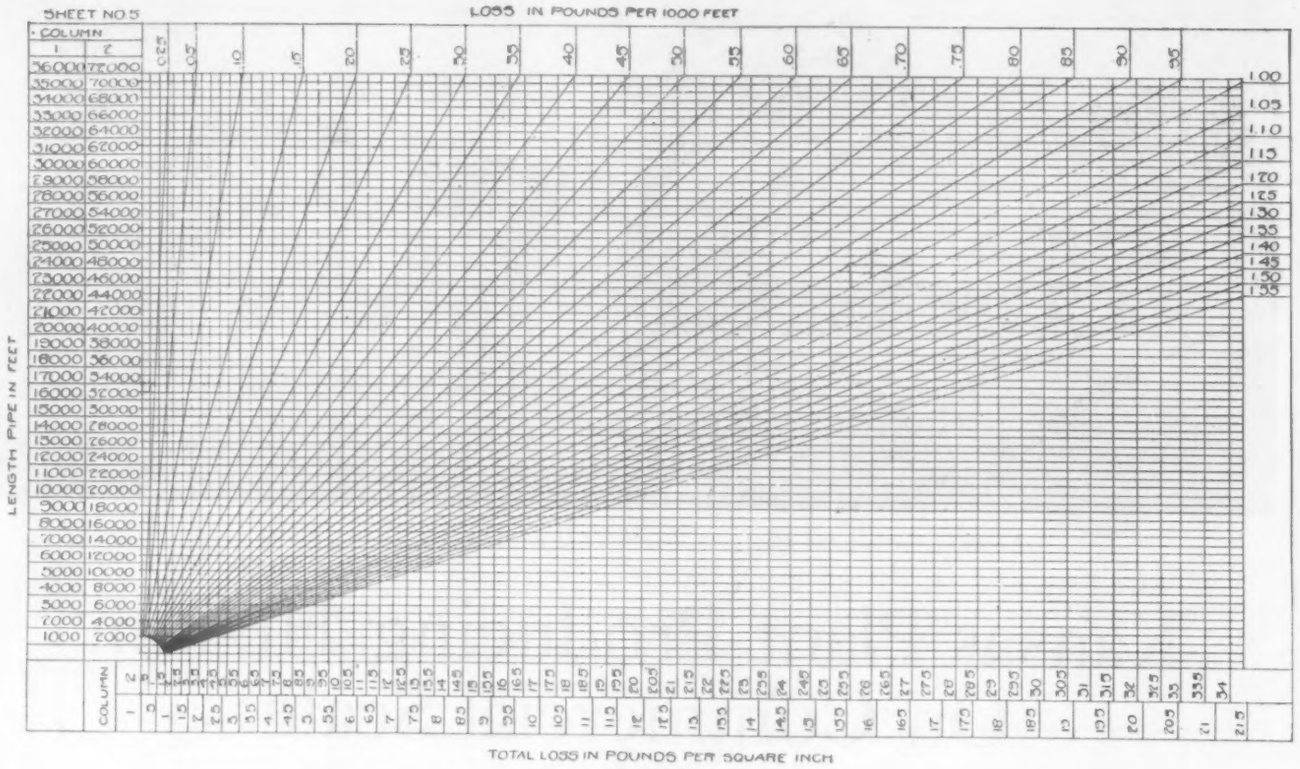


Figure 2

For lengths other than 100 yards multiply the frictional loss by $\frac{\text{No. of yards}}{100}$.

For any other specific gravity than 0.5 multiply the frictional loss by twice the specific gravity of the gas.

The method of ascertaining the frictional loss of gas in short lengths of pipe will be self-evident from an examination of Figure 3.

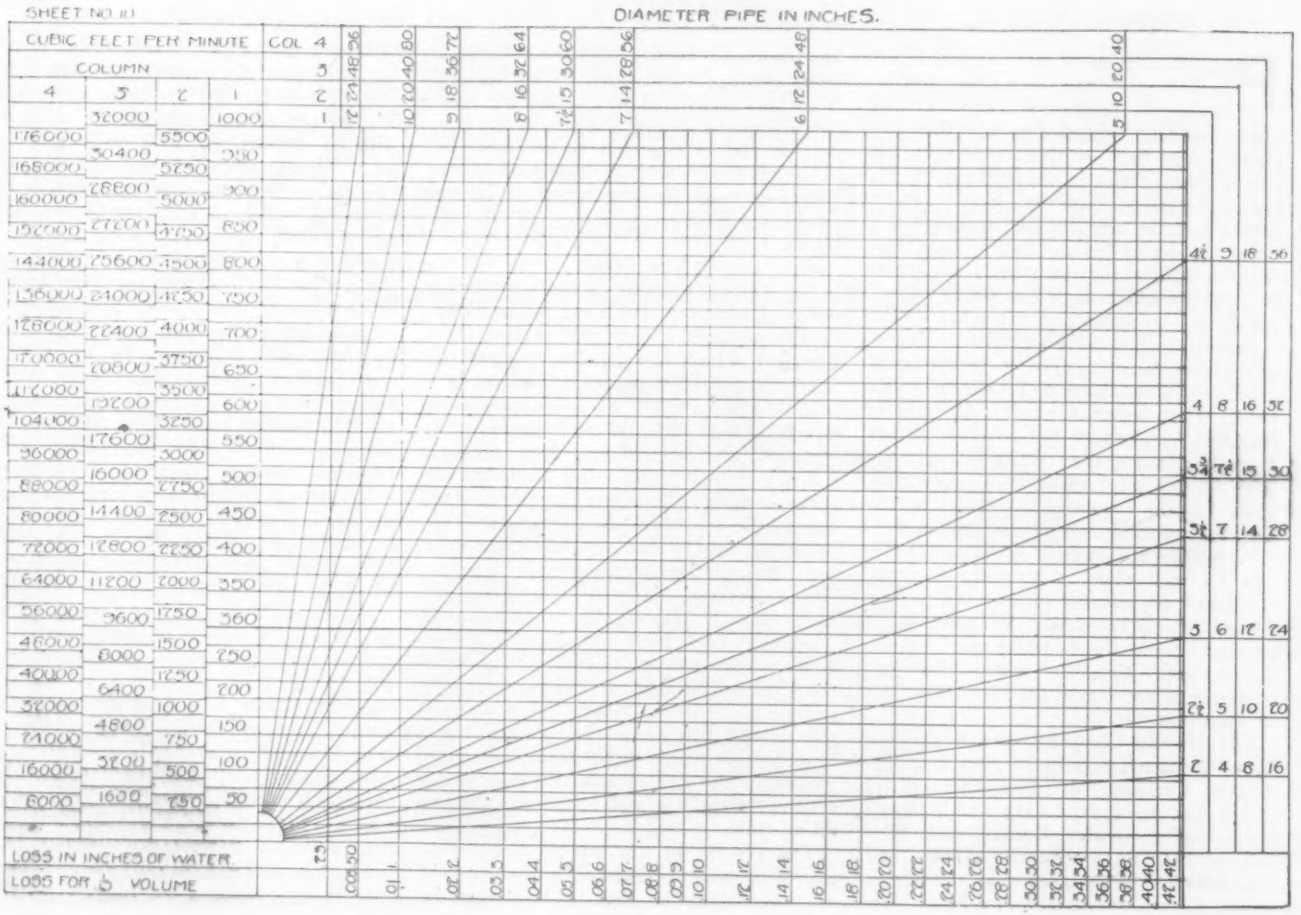


Figure 3

Kentucky Oxygen and Hydrogen Company's Helium Plant at Dexter, Kansas

Kansas Plant Producing Helium On Commercial Scale

United States government is only competitor and only customer in this business of supplying filling for "blimps"

By WALLACE DAVIS
Staff Representative

PRODUCTION of helium gas, heretofore the big item in question with this product, is now marking time, awaiting stimulation of the demand. And lack of this demand is the only present check in the growth of the helium industry, one that has a bright future both in size and importance.

Production of helium during 1927, Bureau of Mines figures reveal, amounted to 6,330,054 cubic feet, practically all of which was produced and extracted by the government plant at Fort Worth, Texas, which has been supplying government needs from production in the Petrolia field. That better demand is in sight is indicated by plans of the government for expending more than $2,700,000 in the Fort Worth plant alone, unless tentative plans for the erection of a plant in the Texas Panhandle are carried through.

While the government owns and operates its own plant, this policy has not eliminated the element of competition, for the policy also holds that the lowest price product turned out is to be used by the government. Thus the commercial production and extraction of helium has had its inception.

The Helium Company, owned and operated by the Kentucky Oxygen and Hydrogen Company of Louisville, Kentucky, has been producing and extracting helium at Dexter, Kansas, since September, 1927, on a commercial basis, and has delivered several cars to the U. S. naval station at Lakehurst, New Jersey. This company owns three helium gas wells near Dexter, and is buying gas from two additional wells. As the market is limited, little expansion in the production end is expected in the near future. However, with prospects of bigger future demand, the acquisition of helium producing discoveries is not at all unlikely.

The Plant

The Helium Company's Dexter plant is equipped with two 185-horse power Cooper compressors. The gas in the Dexter field, which has a helium content of approximately two per cent, undergoes a preliminary process of purification in which carbon dioxide and gasoline is removed, the latter being done through a Southwestern Engineering Company absorption plant. In separating the helium, the gas is subjected to pressure and allowed to liquify for separation through the same method required for separating oxygen and nitrogen from the air in the Louisville plant. Cylindrical tubes similar to those used for shipping acetylene, oxygen or nitrogen are filled with the finished helium product under 1800 pounds pressure, running a capacity of approximately 175 cubic feet in each tube. Shipment is made in the tubes, and from the tubes the gas is run direct to government dirigibles and blimps through a filling tube.

The present helium market has grown out of the non-combustibility of the product as against the lack of this asset in hydrogen gas, which, incidentally, weighs approximately six pounds per 1000 cubic feet, or only one-half as heavy as helium. The weight of these two gasses compares with 85 pounds per 1000 cubic feet for air. The product is described by the production head of the company as an inert gas, which so far is is known, does not combine chemically with any other constituent of natural gas. While for some time it was thought that helium occurred only under shale beds, it more recently has been found in gas sands underlying beds of lime. In the helium wells around Dexter, the oldest known helium gas field, the product is found in small quantities as shallow as 200 feet, but shows the biggest production from 1000-foot sands. Commonly it is found in greatest quantities in gas of low heating value, and is entirely non-combustible. In every case of its discovery the non-inflammable characteristic of the gas in which it occurred identified the helium.

When the first well was drilled in near the Dexter townsite in 1906 work was rushed for piping the town with natural gas for domestic utilization, and it was not until after a system of pipes had been completed that the presence of helium was discovered. Likewise, the recent discovery of gas near Moline, Elk County, Kansas, by Blaudell Oil Corporation of Tulsa fooled the operators. On completion of the concern's Rettig 2, in Section 29-31-10, a test of which showed 3.4 per cent helium, the highest yet dis-

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covered, operators piped the gas to another location to use for fuel in drilling. It would not burn when the crew started work of firing the boiler, and later a wood fire failed to light the gas. This performance resulted in the test proving up the high helium content. Blaudell Oil Corporation's helium well, which flowed around 1,000,000 cubic feet with 860 pounds rock pressure, is producing from five and one-half feet of sand topped at 2120 feet, a new depth for helium gas.

Extracting helium from the gas is a simple process of eliminating the other constituents through freezing rather than heating for bringing vaporizing of the various elements. Inasmuch as helium has the lowest point of liquification the other constituents as nitrogen, oxygen, ethane and methane are thus disposed of. This process, however, is followed only after carbon dioxide and gasoline is removed through the preliminary process of purification, due to the fact that these two constituents form solids during the freezing process, this hindering the procedure of eliminating the various elements of no value to the company. The gasoline content in helium gas produced at Dexter averages .17 of a gallon per 1000 cubic feet. The carbon dioxide content is lower than any of the other constituents, running only a fraction of one per cent.

W. H. Girdler is president of the Kentucky Oxygen & Hydrogen Company, E. G. Luening is vice president, and R. R. Bottoms, of Winfield, Kansas, is general manager of the company.

Lone Star Gas Company Extending System

Dallas, Texas—Extensions and improvements in the natural gas gathering and distributing system of the Lone Star Gas Corporation during 1927 has placed the company in a more favorable position for supplying this commodity to consumers and also has provided a larger market for the producer of gas. The company now owns 2455 miles of main transmission and field lines, according to the annual report recently made public.

During 1927, 869 miles of new line was laid with an increase of 20 compressor stations and six gasoline recovery plants, together with other lands, gas rights and gas and oil leases. During last year the company completed its 10-story modern office building in Dallas wherein is housed the general offices of the Lone Star Gas Company and other affiliated concerns.

The principal additions to property of subsidary concerns, including the Lone Star Gas Company, Meridian Gas Company, Fort Worth Gas Company, Community Natural Gas Company, Municipal Gas Company and Dallas Gas corporation, during 1927 were:

The completion of an 18-inch line from Petrolia station northwest to the Shamrock district in the Panhandle field in North Texas.

The line from Abilene west to Colorado, Texas.

From Waco south to Temple and Belton and from Waco southeast to Mart and Marlin, Texas, and the entire additions east of Greenville, Texas.

The line to and distributing systems in Sulphur and Purcell and intermediate towns in southern Oklahoma.

At a special meeting of the board of directors of the Lone Star Gas Corporation held the latter part of December last year it was voted to increase the authorized capital stock from $30,000,000 to $50,000,000.

Officers and directors of the Lone Star Gas Corporation are L. B. Denning, president; R. A. Crawford, first vice-president and general manager; F. L. Chase, vice-president and operating manager; Karl F. Griffith, vice-president and general attorney; and D. L. Cobb, secretary and treasurer, all of Dallas. Other directors are F. W. Crawford and T. B. Gregory.

The company produces some crude oil and also are manufacturers of natural gasoline in considerable quantity.

Plans All Made for Gas Men at Dallas'

(Continued from Page 54)

12:00 Noon

Complimentary Luncheon, Manufacturers' Building, Texas Fair Grounds.

2:00 p. m.

Resumption of the Question Discussion.

Thursday—May 10, 10:00 a. m.

Fifth Session, Auditorium, Texas Fair Grounds

Paper—"Gas Sands in South Texas"—J. B. Best, The Houston Pipe Line Co., Houston, Texas.

Paper—"Increasing Use of Natural Gas for Oil Recovery and its Economic Effect on the Natural Gas Industry"—E. O. Bennett, The Marland Oil Co., Ft. Worth, Texas.

Reports — Main Technical and Research Committees—H. C. Cooper, chairman. Gas Measurement Committee—F. M. Towl, chairman. Pipe Line Flow Committee—H. D. Hancock, chairman.

Reports—Committee on Chairman's Address.

Committee on Place of Meeting.

Committee on Nominations.

Election of Department Officers.

Report—Committee on Final Resolutions.

Adjournment.

ENTERTAINMENT PROGRAM

Tuesday—May 8, 8:30 p. m.

Vaudeville and Smoker, Junior Ballroom, Hotel Adolphus

Wednesday May 9—6:30 p. m.

Annual Banquet—Speakers — Hon. Dan Moody, Governor of Texas.

Judge C. B. Gilmore, chairman, Railroad Commission of Texas.

O. H. Fogg, president, American Gas Association.

J. J. Taylor, The Dallas News.

Line Will Supply Gas for West Texas Refineries

Dallas, Texas—Clint W. Murchison and Roy W. Moyston are assembling materials to construct a natural gas line from the Hendrick field, West Texas district, to a group of skimming plants located on the Texas & Pacific Railroad in Ward County. This line will require about 20 miles of five and one-half inch pipe to the Railroad, with four-inch lateral lines to the east and west as far as Pyote and Wickett. The producing leases of Murchison and Cranfill Brothers Oil Company in the Hendrick field will supply the gas for the line, and no booster station will be required since the wells have a high rock pressure. Murchison and Moyston own the Wink Gas Company, which is supplying the town of Wink with natural gas, and maintain headquarters on the fourteenth floor of the American Exchange Bank building, Dallas. The Pecos Valley Refining Company, Pyote, and the Bluebonnett Oil Refining Company and Wickett Refining Company at Wickett are to be served with natural gas.

A. P. I. Divisional Meet In Pennsylvania

New York.—Announcement is made from American Petroleum Institute headquarters, of the second regular meeting of the Eastern Division of Development and Production, to be held in the K. of C. Hall, Bradford, Pennsylvania, on May 17 and 18.

Included on the program are several papers of interest:

"Water Flooding in the Bradford Field," by Forest D. Dorn, Forest Oil Company.

"Deep Well Drilling—Cable Tool Method," by J. French Robinson, Peoples Gas Company.

"Deep Well Drilling—Cable Tool Method," by J. G. Montgomery, Jr., United Natural Gas Company.

"Coring with Cable Tools," by R. T. Zook, of Sloan and Zook Company.

"Air Pressure Recovery in the Eastern Fields," by R. M. Haskell, Associated Producers Company.

"Small Field Economies," by A. E. Booth, Bradford, Pennsylvania.

"Some Geological Factors Influencing the Recovery of Oil by Flooding," Paul D. Torrey, of the Northwestern Pennsylvania Producers Association.

A moving picture, "The Story of Petroleum," by the U. S. Bureau of Mines and the American Petroleum Institute, will also be shown on the evening of May 17.

On May 18 there will be a field trip to various points of interest near Bradford, illustrating methods used in drilling, development and recovery in the Bradford field.

Frank M. Brewster of the Petroleum Reclamation Company, Bradford, is chairman of the Eastern Division of Development and Production.

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Dallas Wildcats Honor Association Officials

Dallas, Texas.—Members of the Dallas Wildcat Committee entertained with a luncheon and golf tournament April 27, and had as their honor guests John F. O'Donohoe, president of the Texas Division of the Mid-Continent Oil & Gas Association; Roy B. Jones, president of the Western Petroleum Refiners Association; J. Edgar Pew, vice-president of the Sun Oil Company; and John G. (Jack) Pew, assistant superintendent land department, Sun Oil Company. The latter having recently returned to Dallas from a two months sojourn in South America.

The Wildcat Committee is a social branch of the Mid-Continent Oil & Gas Association, and R. A. "Bob" Wilson, sales manager, Guiberson Corporation, is chairman of the Dallas group. Wilson presided at the luncheon, and announced that at the next monthly meeting the committee would have officials of The California Company, which is soon to move Southern district headquarters from Colorado to Dallas, as honor guests at a welcome program. The Wichita Falls members have been invited to bring along their golf experts and attend this meeting in May.

Roy B. Jones, president of the Panhandle Refining Company, Wichita Falls, spoke on the encouraging trend taken lately by the Mid-Continent refined oil market, and predicted a good year for the Mid-Continent refiners, if plant operations are not increased out of proportion to the demand. John F. O'Donohoe, president of the Petroleum Producers Company, Wichita Falls, made a brief talk, and the two members of the Pew family entertained with a review of their experiences in making the trip to Venezuela.

Visitors at the luncheon included: Del Matthews, manager tax department for Roxana Petroleum Corporation, St. Louis; A. L. Beakley, chief geologist for the Mid-Continent Petroleum Corporation, Tulsa; Homer Lee, veteran wildcatter; H. L. Berry and Ralph Jackson, both of the Beacon Sun Oil Company, Venezuela.

West Texas Production

WINKLER COUNTY

	Producing Wells	Daily Average Prod.
Hendrick Field—		
Roxana Petroleum Corporation	17	*37,135
Humble Oil & Refining Company	15	*34,735
Cranfill & Reynolds, Inc. et al	5	*23,085
Southern Crude-Dixie Oil Company	15	*21,040
Gulf Production Company	11	17,580
Atlantic Oil Producing Co.	14	*13,565
Southern Crude-R. A. Westbrook	13	*12,610
Independent Oil & Gas Company	15	12,005
Landreth Prod. Corp. & Roxana	6	10,850
Texon Oil & Land Company	4	7,700
Atlantic & Collett-O'Keefe	2	*7,410
Pure Oil Company	9	*5,560
The California Company	7	5,005
Republic Production Company	4	4,555
Magnolia Petroleum Company	6	2,975
Murchison & Cranfill Bros. Oil Co.	5	810
Llano Oil Co. & Roxana	2	30
Eastland Oil Company	1	10
Totals	151	216,660

CRANE COUNTY

Church & Fields—		
Simms Oil Co. & Atlantic Oil & Prod. Co.	31	8,430
Landreth Production Corporation	16	7,845
Prairie Oil & Gas Company	12	*7,520
Tidal Oil Co. & Turman-Maxwell	25	*4,490
Magnolia Petroleum Company	33	4,115
Humble Oil & Refinig Company	13	3,925
Eastland Oil Co. & Collett-O'Keefe	8	*2,860
Pecos Oil Company	16	*2,765
Gulf Production Company	11	1,780
Independent Oil & Gas Company	7	1,615
Church-Fields & Bert Weekly	3	965
The Texas Company	2	180
Geo. Church & Bob Fields	2	105
Stidham & Thrasher	1	5
Totals	180	46,600
Gulf-McElroy—		
Gulf Production Company	60	15,815
Gulf-Waddell—		
Gulf Production Company	1	25
Marland-Hughes—		
Marland Oil Company	14	455
The Texas Company	10	170
McMan Oil & Gas Company	2	60
Totals	26	685
Totals for Crane County	266	63,125

REAGAN COUNTY

	Producing Wells	Daily Average Prod.
Big Lake Field—		
Big Lake Oil Company	128	14,635
Texon Oil & Land Company	79	4,385
Skelly Oil Company et al	1	40
Totals	208	19,060

PECOS COUNTY

Yates Field—		
Mid-Kansas-Transcontinental Oil Co.	68	*19,375
The California Company	28	*7,810
Gulf Production Company	17	*5,970
Gulf Production Co. (Crockett County)	3	490
Roxana Petroleum Corporation	12	*4,650
McMan O. & G. Co. & Marland Oil Co.	16	*4,315
Humble Oil & Refining Company	11	*3,550
Simms Oil Company	6	*3,105
Marland Oil Company	10	*980
Red Bank Oil Company	2	510
Oil Operators Trust, Inc.	7	*435
McMan Oil & Gas Company	2	6410
Mazda Oil Corp. & Savoy Oil Co.	1	295
Kirby Pet. Co. & Edson Pet. Co.	1	140
Skelly Oil Company	1	90
Kirby Petroleum Company	1	80
Phillips Petroleum Company	1	80
Grayburg Oil Co. & T. T. Word	3	*15
Totals	188	52,300

MISCELLANEOUS

Upton County	283	12,615
Howard County	143	*3,925
Mitchell County	139	3,010
Crockett County	35	2,220
Jones County	24	1,345
Fisher County	2	215
Runnels County	2	130
Loving County	2	120
Scurry County	5	40
Ector County	1	15
Totals	636	23,635
Totals for all fields	1,449	374,780
Totals previous week	1,432	373,990

(*) Production partially pinched.

Sixteen digging speeds Alligator traction brakes Practically *All-transmission* control

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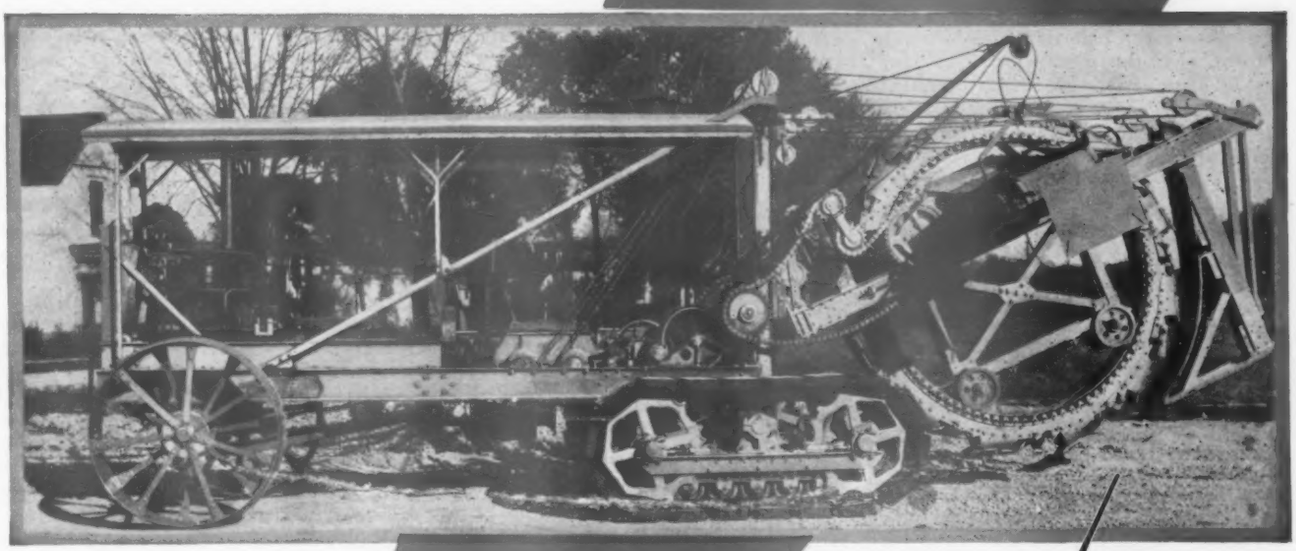

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Depleted Gas Field Now Serves as Storage Tank

Tidal Oil Company runs residue gas from Osage gasoline plants back into natural underground reservoir during slack demand

By WALLACE DAVIS
Staff Representative

IN line with the present urge for conservation, particularly of natural gas, the Tidal Oil Company has a somewhat new departure that might be taken as a pace setter for a very economical procedure among producing companies.

This company is using an old, near-depleted gas pool east of Burbank field, Osage County, Oklahoma, to store residue gas from five gasoline plants, which have an average daily gas yield of of 35,000,000 cubic feet. While the Tidal is marketing this gas to various towns in the territory, the supply outgrows the demand periodically, especially in the summer months. When this pool that had long since paid out became depleted below commercial production, a test proved it hermetically sealed, it became a new asset—an underground reservoir. Proof that the sands would serve for excellent storage for gas was made when rock pressure remained stable after being shut in for two years. Furthermore there was no water present in the sand. And since the company controls 168,000 acres with gas rights around the pool there is no probability of drainage by other wells.

Since discovery and the drilling of five wells in 1921, theer has been a total recovery of 1,112,563,000 cubic feet of gas. The original volume of gas in the sand is figured to have been 1,777,000,000 cubic feet at 290 pounds rock pressure per square inch. During the drilling rush at Burbank in 1922 a ready market was created for the gas as fuel, and during seven months of that year the Tidal produced and delivered 975,813,000 cubic feet. The rock pressure in the pool decreased as a result from 290 to 123 pounds. Again, in the latter part of 1924, demand came for gas, and 45,000,000 feet was taken from the pool in December, 1924, and 90,000,000 cubic feet in January, 1925, reducing the rock pressure to 93 pounds.

Re-Introduction of Gas

Following the January, 1925, production the wells were shut in for four months, when reintroduction of gas was started in the pool. The accompanying table shows returns of gas by months, the total that year being 158,005,000 cubic feet within seven months. Return of this amount increased the rock pressure in the pool to 128 pounds. The wells were again shut in until August, 1927, at which time reintroduction of gas was resumed. A total of 222,384,000 cubic feet was returned during the three months following, and rock pressure was increased to 170 pounds. Return of a volume amounting to 87,228,000 feet in November, 1927, raised the rock pressure to 185 pounds, and 22,160,000 feet in December raised it to 192 pounds, while the taking of 1,750,000 feet with increased demand in December, 1927, failed to change the pressure materially.

At 192 pounds the pressure in the sands approximately equals the line pressure, and no more gas is expected to be reintroduced into the sands until the building of a bootser station during the coming spring. Following completion of this booster the company plans to fill the reservoir to a rock pressure of around 350 pounds.

Two small boosters have been incidentally aiding in returning gas into the sands, they having been installed for the company's main delivery line in running gas to marketing points. This same line carries the residue gas nine miles to the reservoir, and is an eight-inch.

Control Large Tract

Tidal's unique storage system of five old gas wells covers a tract of about 80 acres, lying in Section 35-27-7 and Section 2-26-7, Osage County, on the eastern side of Burbank field. The blanket lease of the Tidal is roughly 12 miles wide, and runs from a point just west of Pawhuska to the Kansas line, touching townships 26, 27, 28 and 29 north and ranges six and seven east. The productive sand is described as a stray sand, and averages approximately 930 feet deep.

The same line that transported the gas to market during demand is returning residue gas into the pool, a product which would otherwise be wasted in the air.

The extent to which other operators might follow the Tidal's method of saving gas is considered limited inasmuch as less than 75 per cent of the pools are described as being a perfect reservoir. Tight sands, large controlled tracts and absence of salt water are prerequisites to profitably following such a procedure. Furthermore the coincidental presence of a partially depleted pool with a nearby gas supply is rare. However, there are many places over the country where such a system can possibly be worked out where gas, now realized as such an important item in maximum recovery, is more than likely being dissipated.

The greatest asset in Tidal's unique gas reservoir, use of which was planned and worked out under the direction of T. A. Hall, engineer, is its economy. Initial cost was no more than the upkeep, and the upkeep is nil. And so the worries of fire, water and storm hazards are eliminated, as are the problems of corrosion, leaks and painting facing owners of man-made storage. Natural facilities for tanking a billion cubic feet of gas at a cost that is negligible is worth consideration by others who by chance might have such a possibility on their properties.

Table showing Tidal's withdrawals and reintroduction of gas into natural reservoir by months, with trend of rock pressure resulting:

Month	Withdrawals	Returns	Rock Pressure Lbs.
February, 1922 .	219,465,000	.....	290
March, 1922	253,423,000	.....	
April, 1922	171,580,000	.....	147
May, 1922	95,276,000	.....	
June, 1922	135,257,000	.....	
July, 1922	90,244,000	.....	
December, 1922 .	10,568,000	.....	123
December, 1924 .	45,000,000	.....	
January, 1925 ...	90,000,000	.....	93
April, 1925	.....	5,687,000	100
May, 1925	.....	14,961,000	
June, 1925	.....	31,497,000	112
July, 1925	.....	38,182,000	120
August, 1925 ...	.....	26,619,000	122
September, 1925	.....	29,750,000	128
October, 1925 ..	.....	8,309,000	128
August, 1927 ...	.....	30,154,000	130
September, 1927	.....	79,632,000	140
October, 1927 ..	.....	112,598,000	170
November, 1927	.....	87,228,000	185
December, 1927 .	1,750,000	22,160,000	192
January, 1928 ..	.....	.....	192
Total	1,112,563,000	486,777,000	

Catalog Announcement

B. and A. Specialty Company, Tulsa, Oklahoma, is distributing a catalog which describes Robinson Orifice fittings made by the Robinson Orifice Fitting Company, Los Angeles. The B. and A. Specialty Company is the Mid-Continent representative and will gladly supply copies of the catalog to any one requesting them. The Robinson fitting was designed for use wherever it is necessary to measure air, gas, water or oil.

Hardens Quickly and Evenly
—*Without Accelerators or Admixtures!*

LARGE operators throughout the Mid-Continent Field have found Oilmax Cement a great time and money-saver in setting casings, shutting off water, straightening crooked holes, plugging back, cementing off lost tools, filling cave-ins or caves and all difficult bottom hole work. Because, used neat only, it gets as hard in 24 hours as Portland Cement in ten days—*and requires no accelerators or admixtures.*

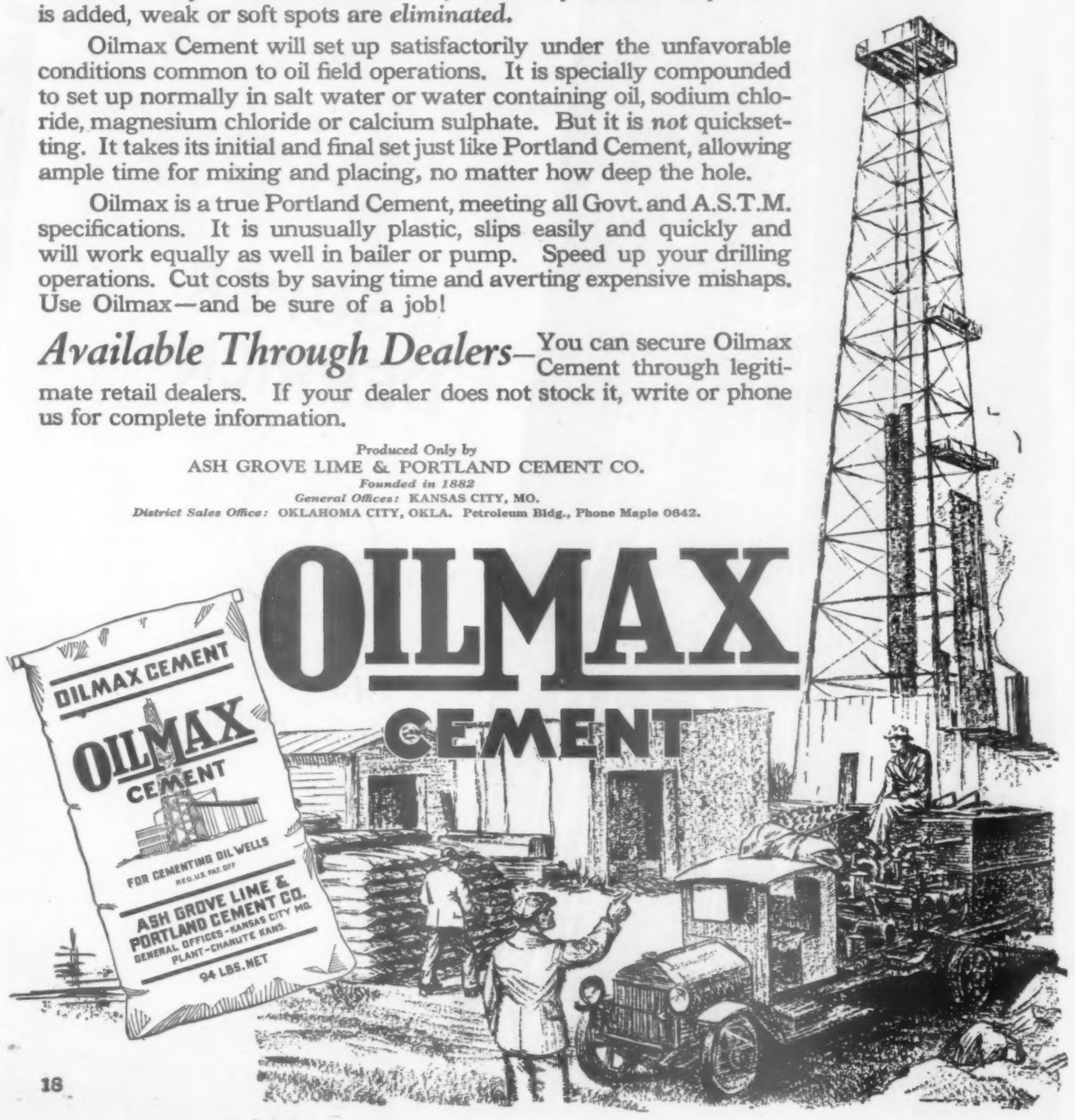
That's why casings can be set with Oilmax today and drilling operations resumed in 48 hours at the most. Oilmax always sets and hardens *evenly.* With a uniform mix, made easy because only water is added, weak or soft spots are *eliminated.*

Oilmax Cement will set up satisfactorily under the unfavorable conditions common to oil field operations. It is specially compounded to set up normally in salt water or water containing oil, sodium chloride, magnesium chloride or calcium sulphate. But it is *not* quicksetting. It takes its initial and final set just like Portland Cement, allowing ample time for mixing and placing, no matter how deep the hole.

Oilmax is a true Portland Cement, meeting all Govt. and A.S.T.M. specifications. It is unusually plastic, slips easily and quickly and will work equally as well in bailer or pump. Speed up your drilling operations. Cut costs by saving time and averting expensive mishaps. Use Oilmax—and be sure of a job!

Available Through Dealers—You can secure Oilmax Cement through legitimate retail dealers. If your dealer does not stock it, write or phone us for complete information.

Produced Only by
ASH GROVE LIME & PORTLAND CEMENT CO.
Founded in 1882
General Offices: KANSAS CITY, MO.
District Sales Office: OKLAHOMA CITY, OKLA. Petroleum Bldg., Phone Maple 0642.



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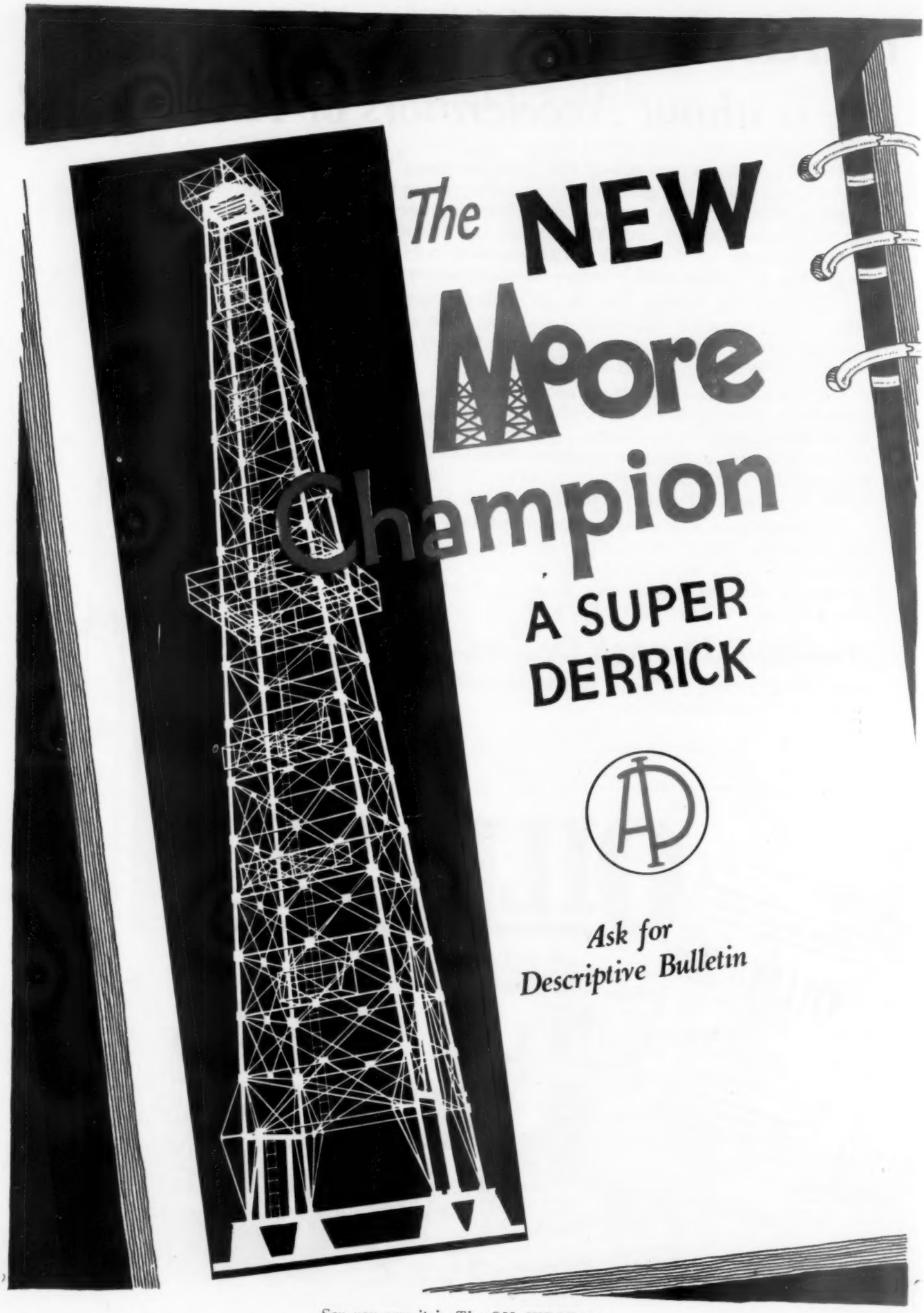
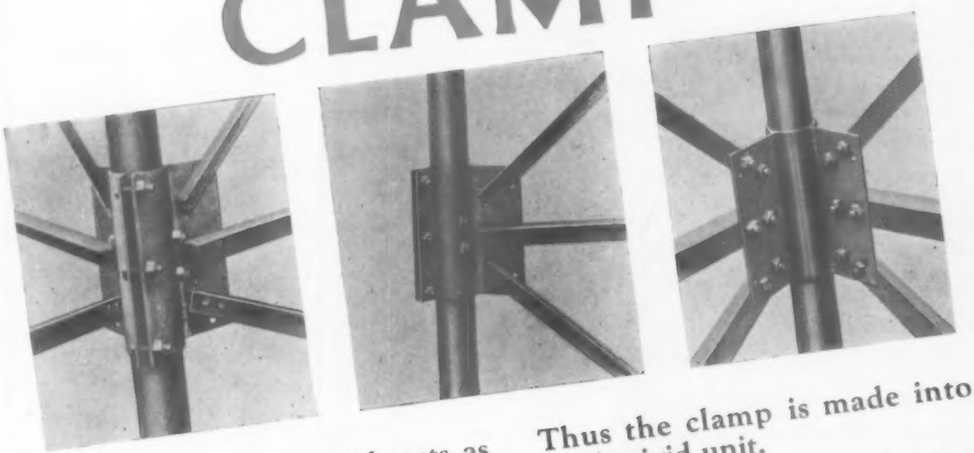


Say you saw it in The OIL WEEKLY

ONE PIECE ROLLED STEEL PLATE CLAMP



The Moore Clamp, which acts as an efficient joint for leg sections, and provides a convenient attachment for girts and braces, has a solid body of rolled steel plate.

The section of the clamp between the flanges is *automatically* welded by the electric carbon arc process. Since the operation is automatic, the strength of the weld is kept at a uniformly high standard. One-inch reinforcing welds are made by hand on the inside at each end, giving a double weld on the ends.

Thus the clamp is made into a single rigid unit.

Three ¾″ bolts through the clamping flanges, insure a vice-like grip on the leg sections, while two ¾″ bolts through the body of the clamp and through the leg sections, prevent leg sections from being pulled out, even by the heaviest horizontal loading. Girts and braces are attached to the flanges of the clamp. For standard construction, double bolting is used in 122′ derricks, and a single bolt in all others.

LEE C. MOORE & CO., *Inc.* PITTSBURGH · TULSA

Established 1907
OILFIELD EQUIPMENT COMPANY
NEW YORK OFFICES: OILFIELD EQUIPMENT COMPANY
30 CHURCH ST., NEW YORK, N. Y.
Stocks in All Principal Fields

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New System for Air-Gas Application

A new system of flowing wells with air or gas pressure, which is designed to keep pressure off the oil sand and furthermore add to the existing rock pressure of the well, has recently been introduced into the Mid-Continent by N. B. Ragland, well known drilling contractor, who has spent the past few years in working with artificial methods of recovery. The system has been tried with some success, but is yet going through the experimental stage. Mr. Ragland is at present experimenting in the Muskogee townsite field where production is from 500 to 545 feet, a logical field for getting quick results and doing so at a small cost.

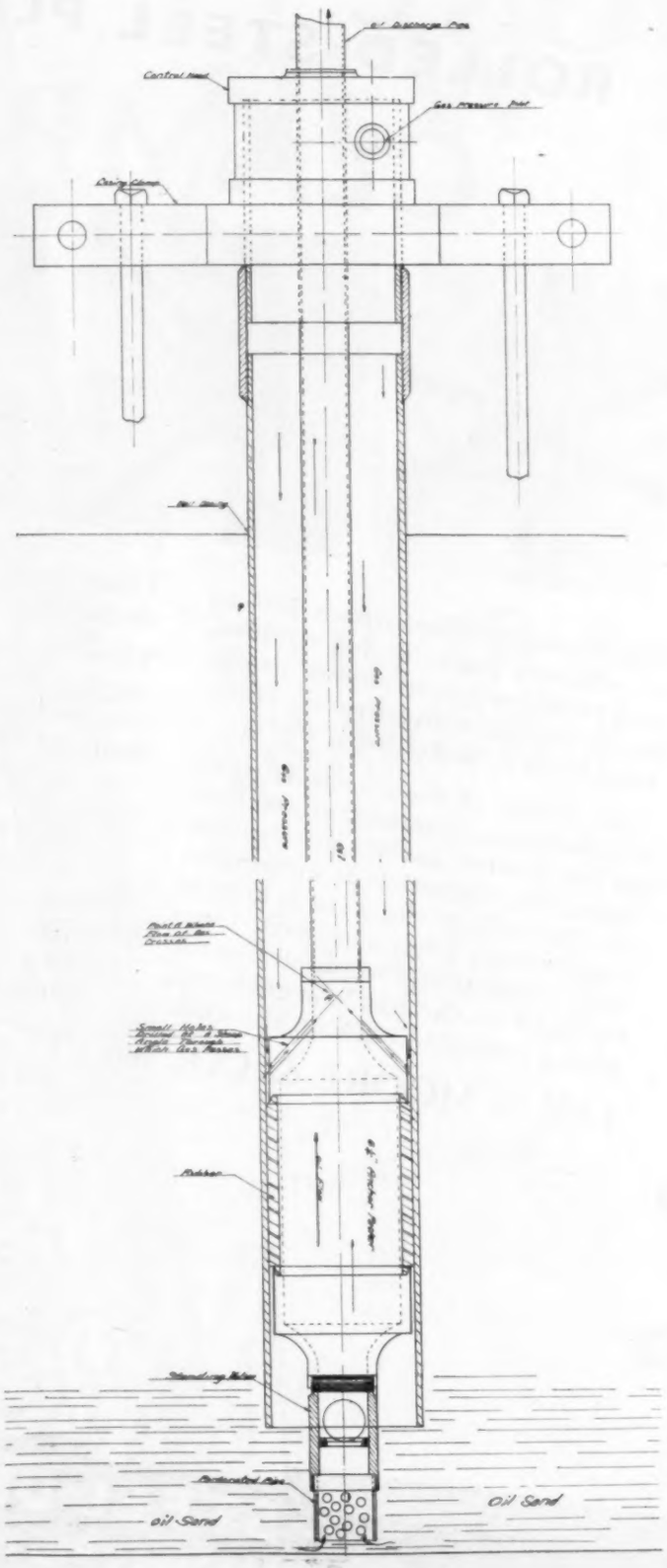
In his new departure from the common methods of flowing wells by use of air or gas, he especially stresses the importance of keeping the artificial pressure off the sand body. As is shown in the accompanying illustration, the air or gas is introduced in the same method as commonly seen in the Mid-Continent territory; that is, where the methods employed are to inject air or gas through the casing, outside the tubing, and flow the oil through the latter. The method is the same as former ordinary methods until a certain point near the bottom of the well, where he has an oversized anchor packer. At this point the air or gas is diverted toward the casing and into a quarter-inch pass alongside of the packer. This pass is closed by rubber packing against the casing, and at this point the pressure is turned from each side of the casing into a jet at sharp angles, and carried to a common point into the bottom of the tubing, below the oil level in the hole. Thus the pressure is upward, and simply added to the existing rock pressure. This arrangement is designed to not only keep pressure off the sand, but to alleviate the natural pressure caused by the weight of the oil body.

The purpose of the packer, then, is simply to reverse the air or gas flow. An oversized standing valve does not allow the pressure to reach the sand. The gist of the whole purpose, as explained by Mr. Ragland, is to reduce the rock pressure at the top of the sand to an atmosphere pressure, plus friction caused by circulating air or gas through the pipe.

The anchor packer is screwed on the bottom of the tubing. A hook wall packer, according to Mr. Ragland, will serve the same purpose as the anchor packer. The jets, which are quarter-inch, come within two inches of each other at the common point of air or gas output near the bottom of the tubing.

For his experimental work in the Muskogee shallow pool Mr. Ragland has installed a 160-horsepower Clark compressor and has a hook-up of two-inch lines to the point of operation. His first experiment in this field increased the production from around 20 barrels to a rate of 400 barrels

(Continued on page 80)



Ragland Flow Device

Rotary Drilling Equipment

and our intimate knowledge of drilling problems

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Wilson Tongs & Elevators

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Combine to give the driller an agency of merit that can readily solve his drilling problems

Every driller knows his particular problem better than anyone else—he knows the correct equipment needed and how it should be used. He, therefore, prefers to deal with people who, by years of actual experience, have an intimate knowledge of his problems that gives them a better understanding of his needs.

The T. T. Word Supply Company is just such an institution. T. T. Word, president, has spent many years on derrick floors. He and his associates know and understand drilling problems, consequently, they have a sincere appreciation of the problems that daily confront the driller.

This institution, by applying their knowledge and experience to the solution of these numerour problems, presents a line of drilling and pumping equipment that is best fitted to overcome and eliminate the difficulties that harass the driller or production man.

T. T. WORD SUPPLY CO.

SHREVEPORT, LA. HOUSTON, TEX. LAKE CHARLES, LA.

New Power Requirements

IDEAL-AJAX TWIN ENGINES

Ideal - Ajax Steam Drilling Engines excel in every test of performance.

Rugged and powerful, equipped with enclosed crankcase, lubrication the valveless Ajax Carson Sight Feed Lubricator and Ajax Greenwood Safety Throttle Valve—they are the last word in rotary drilling equipment.

Two photographs of Magnolia Petroleum Co.'s Gladys No. 2, in the Spindle Top Field, Beaumont, Texas. This well was drilled to 5,200 feet and came in for better than 3,000 barrels a day.

The engine was a 12x 12 Ideal-Ajax Twin

Magnolia Co.'s Drilling Crew on their Gladys No. 2:

Left to right: Grady Young, C. E. Fry, D. W. Stud, W. A. Gray, B. D. Mosley, and C. W. Howard, driller.

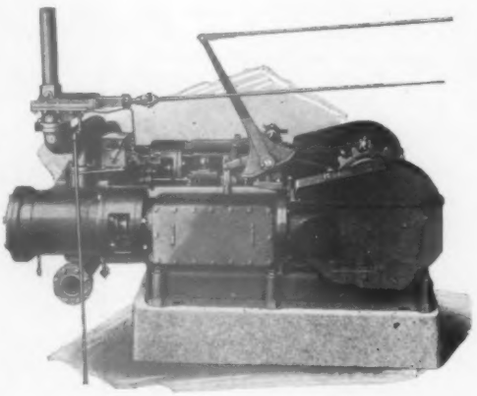
IDEAL-AJAX STEAM DRILLING

Say you saw it in The OIL WEEKLY

in Rotary Drilling

TODAY wells are being sunk by rotary drills to depths considered impossible a few years ago. New conditions make new demands on the drilling engine. These demands are for even torque, and reserve power.

An ordinary 4-cycle gas engine delivers one power stroke in two revolutions. A double acting steam engine has *two* power strokes *every* revolution—or four times as many as a gas engine. A twin cylinder steam engine will deliver the same number of impulses per revolution to the drill tools as would an *eight cylinder* gas engine. This means even torque, preventing twist-offs and minimizing damage to the tools.



Flexibility is an important factor. When the drill stem becomes fouled, the steam engine stops. The gas engine, with the momentum of flywheel and other weight, is more liable to twist off the pipe before it stops on rotary tools, or breaks the drilling line on cable tools.

It also means plenty of reserve power. For while 60 H.P. is absolute maximum for a gas engine so rated, the Ideal-Ajax has a reserve of 600 H.P. or more, depending on the boiler pressure and speed.

The Ideal-Ajax twin has been aptly named. It is truly the "ideal" engine for rotary drilling.

AJAX ENGINES

Made by

AJAX IRON WORKS
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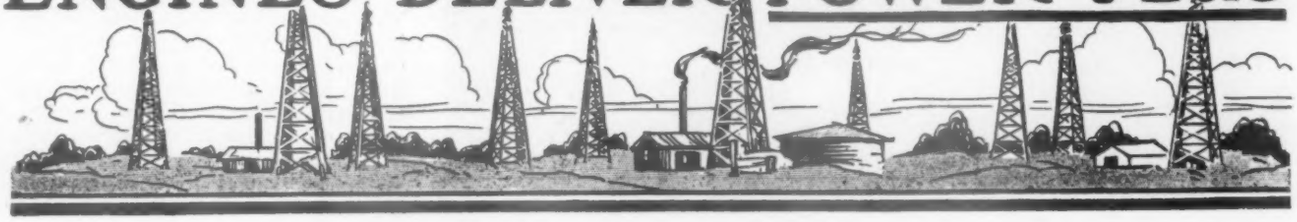
DISTRIBUTED BY
THE NATIONAL SUPPLY COMPANIES

In every oil field.

ENGINES DELIVER POWER-PLUS



Montebello Lease Includes Many Equipment Conveniences

McGinley Oil Company property has been in operation for 10 years and produces 2,000 barrels daily from 26 wells

By BRAD MILLS
Staff Representative

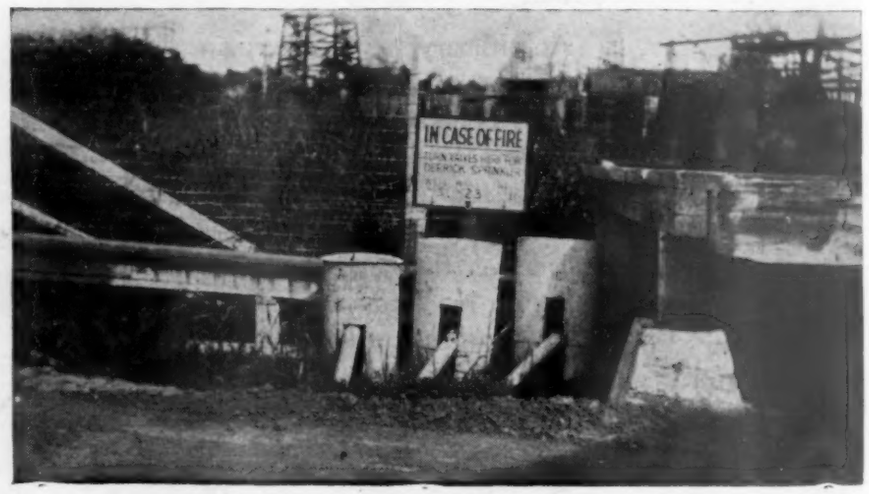
CONSERVATIVE management, sensible equipment and progressive ideas have combined to make the McGinley Oil Company one of the most successful operators in the Montebello field. Although the 160-acre lease is near the edge of the field, the company is producing nearly 2000 barrels daily from 26 wells.

The general arrangement is not a pretentious layout; but all equipment is strategically located. Boiler houses, tanks, pumps and buildings are placed where they will serve best. Improvements have been made here and there to great advantage.

The lease is practically a complete producing unit. The company maintains its own power plants, dehydrators, water system, warehouse and storage. The storage facilities are inadequate for a long period, but sufficient for all ordinary purposes. In case of emergency the present storage would care for more than two weeks' production.

Three steam power plants furnish energy for all purposes. These plants are located at convenient places on the lease and each consists of either three or four boilers, which vary from 60 to 110 horsepower. Gas is used for fuel.

One of the outstanding installations is a water heating system built between the boiler feed pumps and the boilers. Each power plant requires one heater. The heating arrangement consists of a joint of 20-inch pipe or casing, inside of which has been built a series of two-inch coils. The exhaust steam from two or three engines nearby is fed through the large joint of casing. The water from the pumps circulates entirely through the series of coils before entering the boiler. The temperature of the water is raised from about 100 degrees to almost 200 degrees. By placing the heating arrangement between the pumps and the boiler, the usual trouble resulting from hot pumps is eliminated. The back pressure on the steam engines is negligible. Under normal conditions, the steam is so completely utilized that little escapes.



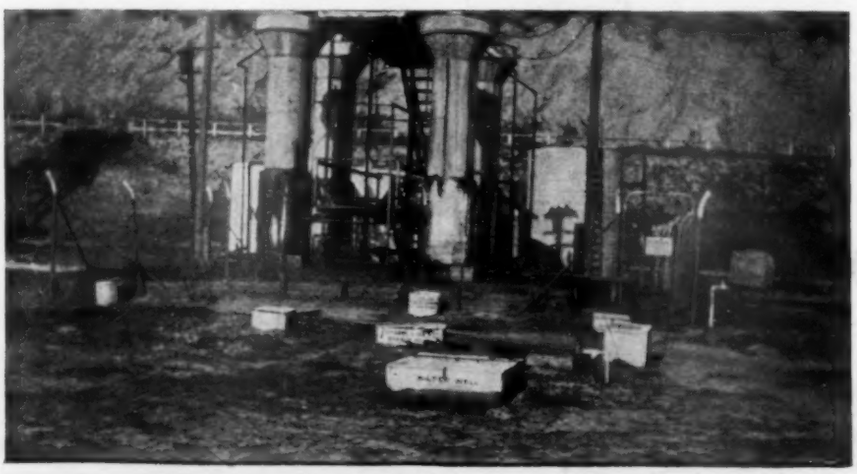
Convenient arrangement for operating derrick sprinklers

Water System

The company maintains its own water pressure system. Pipe lines have been laid to every part of the lease. Three 12x6¾x 14 giant mud hog pumps have been converted into water pumps to maintain a constant pressure. Any one or all may be operated at once. Automatic regulators have been built into each pump. When several faucets are opened at once, the pumps immediately work faster to maintain the desired pressure. A small river runs through the lease, insuring an adequate supply of water at all times.

Each derrick is equipped with a water sprinkling system, which consists of two two-inch pipe lines leading from the derrick floor to the crown block. These two lines are built in diagonally opposed corners of the derricks. Staggered rows of eight-inch nipples have been welded onto the two-inch lines, which have been perforated for the purpose. When the main valve is opened, dozens of sprays are trained on every part of the derrick.

The warehouse and tool platform are neatly arranged and contain almost every piece of equipment likely to be needed on the lease. Fishing, drilling and production equipment is arranged in order and the lease is not cluttered with miscellaneous tools.



Dehydrators on McGinley Oil Company's Montebello lease

Steam Pumping Engines

Much has been said concerning the cost of steam power. The McGinley lease is using steam to good advantage. After the lease was developed, it was not considered economical to discard the boilers. They were already on the lease and were in good condition. As the result, each well was given a steam engine and the boilers were connected in units to furnish the necessary power. The wear and tear on the engines has been offset by the results of several years satisfactory service. The engines are throttled down to about 80 revolutions per minute, giving the

You'll buy LINDE OXYGEN

When you think of oxygen in terms of what it will do . . . . .

When you realize that the cheapest oxygen is that which is *used* most effectively . . . . .

When you know the value of Linde Process Service . . . . .

Then you'll buy Linde Oxygen.

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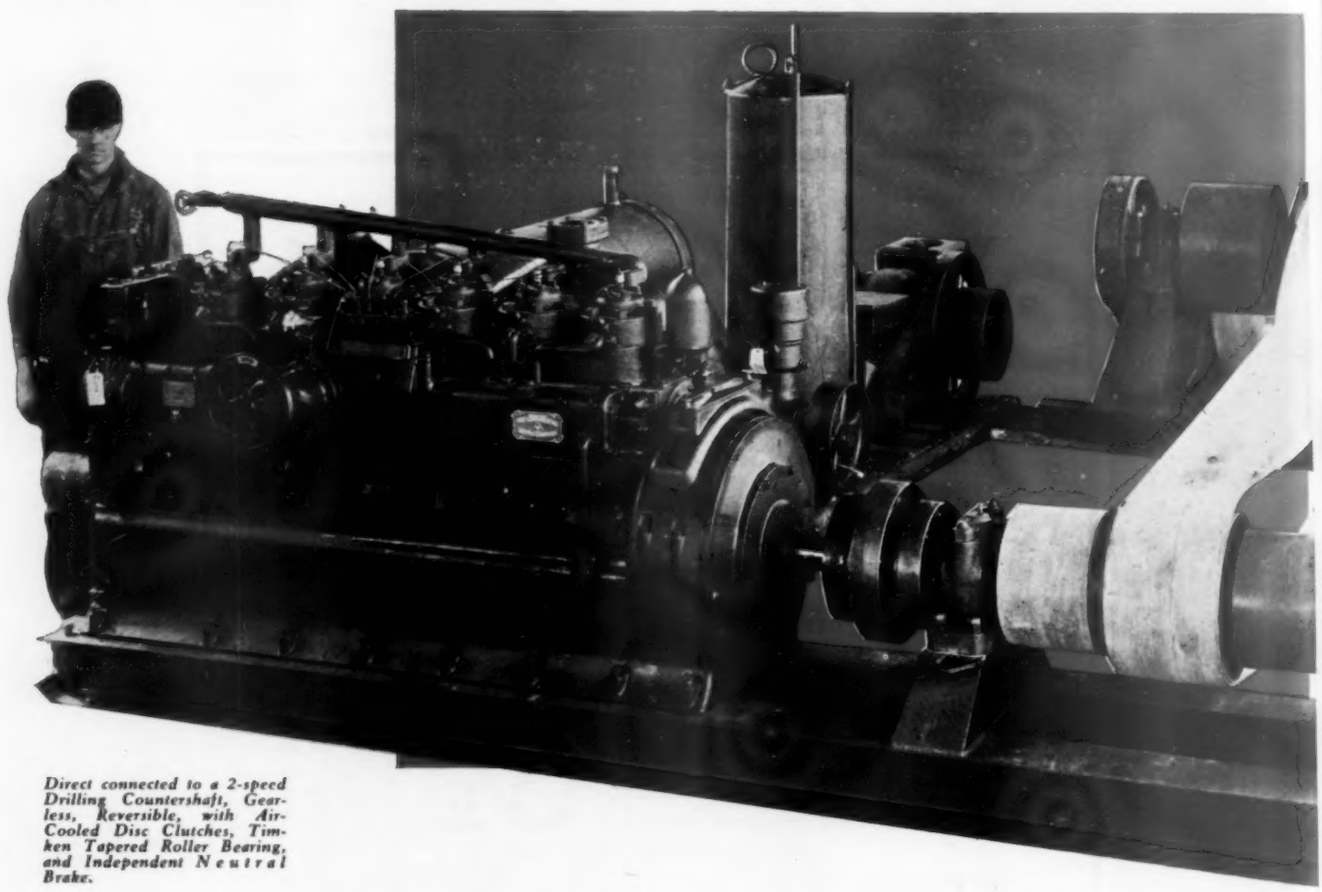
48 PLANTS . . . . . 105 WAREHOUSES

FAIRBANK

ANNOUNCE

A Portable Diesel Cable

BURNING CRUDE OIL AND WITH SEL



Direct connected to a 2-speed Drilling Countershaft, Gearless, Reversible, with Air-Cooled Disc Clutches, Timken Tapered Roller Bearing, and Independent Neutral Brake.

CONTIN

Say you saw it in The OIL WEEKLY

KS-MORSE

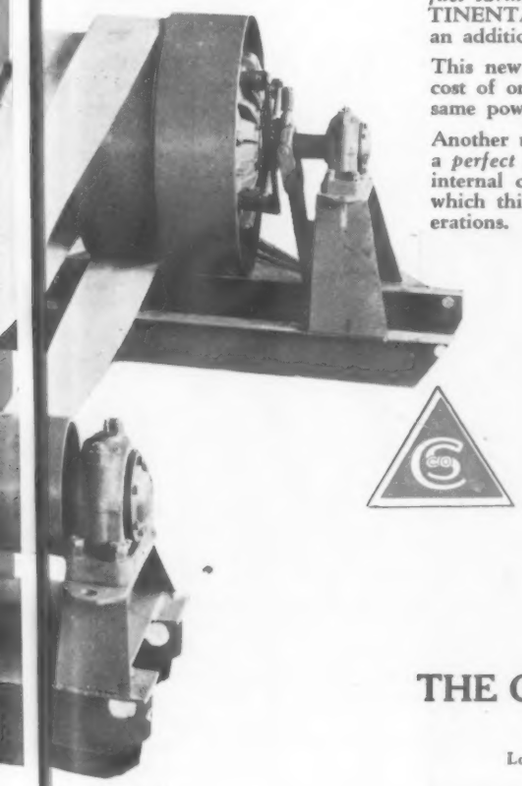
e Tool Drilling Unit—

ECTIVE DRILLING MOTION CONTROL

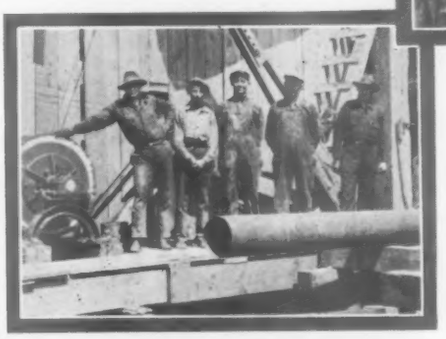
The announcement of a cable tool drilling engine that operates *on crude oil*—and thus accomplishes *tremendous fuel savings*—will be welcomed by the industry. CONTINENTAL is pleased to announce such an engine as an addition to the Fairbanks-Morse line.

This new engine operates on crude, at an approximate cost of only $2.25 daily, whereas gasoline to obtain the same power would cost around $20.00.

Another unique feature of distinct value is the fact that a *perfect drilling motion* has at last been achieved in an internal combustion engine. Investigate the manner in which this remarkable new unit handles all drilling operations. Literature on request.



Speed Control Wheel and Selective Motion Control Dial on headache post, operating governor which instantly varies the speed of the engine through its entire range, and also instantly varies the motion to suit the special requirements of the job. Eureka, Kansas, field.



This drilling crew is operating an F-M Diesel Drilling Unit near Vernon, Texas.

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The Continental Supply Company, Ltd.
69 Thomas Block, Calgary, Alberta, Canada

IENTAL

pumps about strokes per minute. The wells are all pumped 24 hours per day. The length of the stroke is about 30 inches, depending upon the action of the well. Montebello crude has an asphalt base, making it unnecessary to pull rods and tubing at frequent intervals.

The storage includes 13 2000-barrel tanks and a 5000-barrel tank. Like other equipment, the tanks are located on the most convenient parts of the lease.

A four-unit, electrically operated dehydrator has been installed. Its capacity is far greater than the amount of oil now treated. Oil from only three wells contains enough stubborn water to require treating. The average cut from all wells is less than 10 per cent.

In addition to the major installations and improvements, many small convenient arrangements have been provided. All fire fighting equipment is plainly marked and accessible from both near and remote points. Fire siren boxes have been installed and small, hand chemical tanks have been provided.

The McGinley lease has been producing 10 years and has gone through several periods of depression in the oil industry The price of oil is now very low, but the lease is being operated successfully in the face of this and other handicaps.

New System for Air-Gas Application

(Continued from page 72)

in one well. Due to the close locations resulting from lot drilling in the pool, other producers were curtailed, and the air lift was temporarily discontinued there.

Patent has been applied for on the new system. Mr. Ragland is associated with B. & A. Drilling Company, of Walters, Oklahoma. During the past two years he has sub-contracted for this concern in the Seminole fields, and spent much time studying production methods. He is the discoverer of the Hewitt, Oklahoma, field of Carter County.

HOW OIL MEN PLAY

H. B. Longworth Contends That It Is Unnecessary to Get Away From Work to Find an Enjoyable Pastime

H. B. LONGWORTH, production superintendent for Marland Oil Company in the Coffeyville and Sedan, Kansas district, contends that it is unnecessary to get away from work to find an enjoyable pastime. Te has had a lot of fun during his 34 years of service in the oil industry, just tinkering with his job, whatever it happened to be. His hobby is dabbling with production equipment, devising the new or improving the old, and this kind of sport has resulted in his contributing to the industry several outstanding pieces of equipment.

A certain studious citizen of New Orleans, who earns his living by guiding tourists over the city, has, during the past quarter of a century, learned the history of most of the world by simply swapping his home-town history for that of the homes of his clients. That is irrelevant here except that it might be compared with Longworth's methods of learning the oil business. He learned some of the important factors about laying lines while digging ditches in 1886 at Lima, Ohio, and by swapping this knowledge for certain production information, got into the producing branch of the Northern Indiana Oil Company at Geneva, Indiana. A roughneck for a while, he was promoted to tool dresser and then driller. In 1893 he started contract drilling. His next step was a connection with the Devonian Oil Company, going to Allegheny, New York, and later returning to Lima, Ohio, with the same company. As a partner to a brother, I. R. Longworth, he did independent operating around Lima for two years. As a producer he perfected an electric heater for melting paraffine wax around rods and tubing, experimenting with his own properties. The price of oil (then 35 cents per barrel for Lima grade) prohibited the use of the machine, due to expense of making and operating them.

Selling his Lima properties, he went into the leasing business, moving to Fletcher, Ontario, Canada, in 1907. "But methods of brokerage cannot be accurately swapped, and I went broke," Mr. Longworth said.

Bad health kept him out of the oil business seven years, during which time he lived in the Blue Ridge hills of Virginia.

As a mechanic for Graham Brothers Truck Company for three years in Lima, he learned more about machinery. In 1919 he came to Ponca City with the Marland Oil Company and was made district superintendent in the Osage. A working barrel for 5-3/16-inch casing devised by Longworth to pump a well without tubing is being used by his company on occasions where certain production problems arise, and has been found to result in a large increase in several wells.

H. B. LONGWORTH

Longworth has been district superintendent for Marland Oil Company in the Coffeyville-Sedan area for two years. He is the creator of an unusually valuable stuffing box in which there is a spring to keep the tension on the packing. One of his newest contrivances in the way of production equipment is the "teapot head," through which he is enabled to flow a well with an air jet, take a constant gauge of the pressure, pump the well and take the temperature of the fluid at the bottom of the hole.

Mr. Longworth is in charge of Marland's experimental farm at Coffeyville, where a number of young university trained men are continually going through a stage of practical training. He has made it a special point during his time spent at this experimental farm to learn all he could.

HERE IS YOUR FACTOR OF SAFETY

PENBERTHY PRODUCTS

The structural steel work in your derrick is figured with an adequate factor of safety. Your boilers and fittings are designed with a large safety factor. ¶ But what of your equally important boiler feed water system? ¶ The Penberthy Automatic Injector supplies that factor of safety. It removes every vestige of uncertainty, delay or trouble from your boiler feed water supply. ¶ There is a Penberthy Injector suited to your specific requirement. Penberthy Products for oil field power units are carried in stock by leading supply houses.

PENBERTHY INJECTOR COMPANY

ESTABLISHED IN 1886

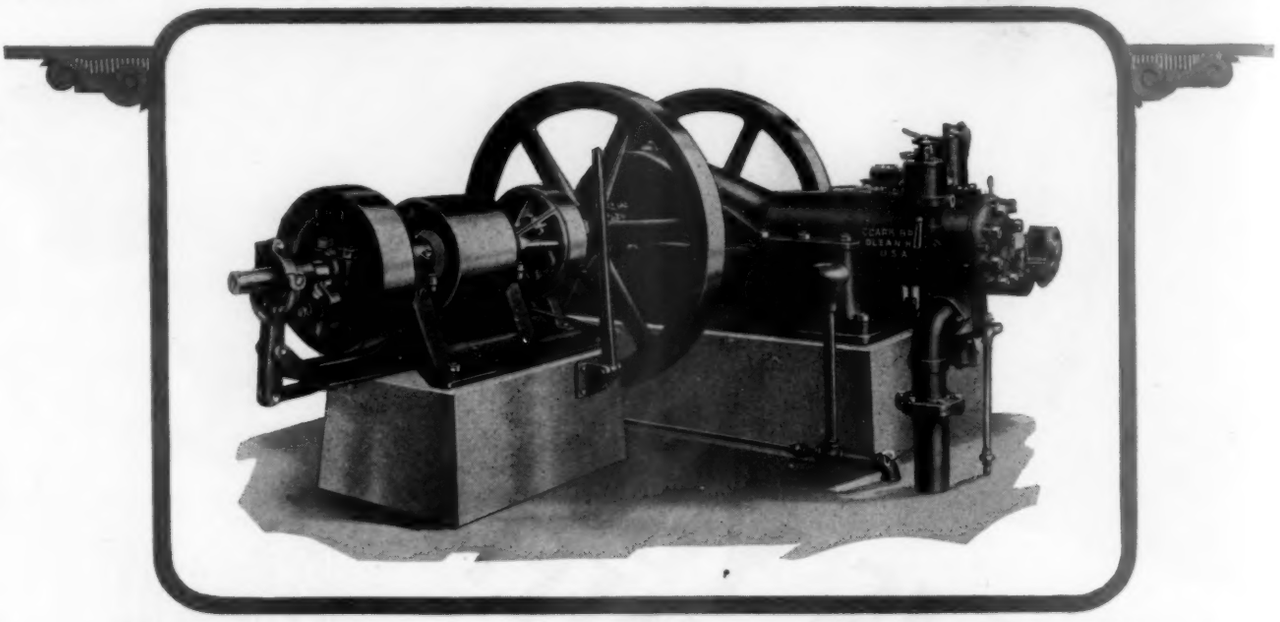
DETROIT

CANADIAN PLANT WINDSOR, ONT.

Say you saw it in The OIL WEEKLY

CLARK PUMPING ENGINE

WITH THE WORLD'S STRONGEST CLUTCH



Built for Long-Time Satisfaction

The CLARK Pumping Engine and Clutch are built to serve for a maximum period of years with a minimum of upkeep expense. Scientific engineering, extra rugged parts, correct lubrication, quality materials and the most careful workmanship are combined to provide a unit on which the operator can depend without reservation.

The ENGINE has enclosed crankcase and bored main bearings with replacable bronze-backed liners. Sight feed lubrication is provided at cylinder, wrist pin and crank pin. Main bearings are automatically chain oiled. Hardened cams, gears and oil pump run in an oil-tight box. The CLUTCH has double bearing to remove all strain from crankshaft. Lubrication is thorough and foolproof. All parts accessible.

The CLARK Pumping Engine is 4-cycle, economical of fuel, easily started and not temperamental. 40 H.P., 275 R.P.M., 11″ bore by 20″ stroke. Sensitive, variable speed governor.

Ask for complete details regarding the money-saving durability of this pumping unit.

Clark Bros. Co. Olean N.Y.

CLARK BROS. COMPANY

Olean, N. Y.

Branch and Warehouse: 125 W. First St., Tulsa

Warehouses at McCamey and Sweetwater, Texas, and Artesia, N. M.

SMITH BOOTH USHER COMPANY

228 S. Central Ave., Los Angeles. 50 Fremont St., San Francisco

CLARK

Say you saw it in The OIL WEEKLY

United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

1927	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Ave.	United States Total
January	598,500	117,200	466,400	173,900	52,900	131,550	107,850	84,450	653,450	2,386,200	73,972,150
February	693,350	116,250	479,800	154,600	52,800	128,200	107,150	85,300	642,700	2,460,150	68,884,300
March	710,350	116,100	475,000	154,750	51,450	124,500	104,400	87,600	640,850	2,465,000	76,414,900
April	723,700	115,400	477,300	155,100	50,500	113,350	108,000	89,350	644,550	2,477,250	74,317,750
May	742,200	114,600	488,700	151,300	47,450	112,700	114,000	89,300	633,550	2,493,800	77,307,700
June	768,600	112,200	480,800	151,650	49,150	112,450	111,850	86,050	638,550	2,511,300	75,338,900
July	846,750	107,750	475,800	142,950	56,200	109,900	111,800	86,950	620,700	2,558,800	79,322,300
August	832,900	105,100	483,450	139,350	56,950	104,750	114,600	80,750	621,450	2,539,300	78,717,850
September	797,450	105,200	493,750	142,900	53,450	101,350	110,800	74,500	637,250	2,516,650	75,498,900
October	782,300	105,100	497,900	138,400	51,300	100,450	113,600	73,250	629,000	2,491,300	77,230,000
November	766,900	106,650	501,750	138,100	49,400	97,850	114,900	75,050	623,850	2,474,450	74,233,500
December	720,700	106,150	531,650	138,500	47,200	94,950	111,250	77,150	624,600	2,452,150	76,017,050
1928											
January	675,450	108,300	523,300	125,450	45,250	90,050	109,600	77,000	617,100	2,371,500	73,516,500
February	664,450	110,550	538,750	115,800	45,300	88,250	104,850	75,550	614,750	2,358,250	68,388,850
March	646,850	112,250	575,850	119,900	44,400	85,600	102,150	78,700	617,450	2,383,150	73,877,650
April 7	627,750	114,500	609,950	123,400	45,050	84,700	104,500	77,000	608,400	2,395,250	16,766,750
April 14	624,800	112,350	600,450	119,100	48,850	85,300	106,000	75,950	609,800	2,382,600	16,678,200
April 21	620,550	111,350	612,650	117,050	47,750	85,200	107,500	79,200	612,500	2,393,750	16,756,250
April 28	609,650	111,000	632,650	114,350	46,500	78,500	109,000	81,150	621,000	2,403,800	16,826,600
Increase	.....	.....	20,000	.....	.....	.....	1,500	1,950	8,500	10,050	70,350
Decrease	10,900	350	.....	2,700	1,250	6,700	.....	.....	.....	.....	.....

TEXAS

(Outside Gulf Coast)

PANHANDLE DISTRICT

	April 28	April 21
Carson County	7,600	7,400
Gray County	19,550	19,000
Hutchinson County	42,100	41,700
Wheeler County	1,000	950
Others	250	200
Totals	70,500	69,250

NORTH TEXAS

Archer County	21,000	19,000
Baylor County	100	100
Burkburnett	11,150	13,250
Clay County (Petrolia)	550	550
Electra	12,750	12,000
Iowa Park-KMA	3,200	2,000
Montague and Cooke Cos.	12,150	12,000
Wilbarger	11,750	10,550
Totals	72,650	69,450

WEST CENTRAL TEXAS

Brown County	12,750	12,300
Callahan County	3,750	3,850
Coleman County	1,700	1,900
Eastland-Desdemona	7,650	7,700
Jack County	1,450	1,500
Palo Pinto County	450	500
Shackelford County	9,500	10,000
Stephens County	8,000	7,600
Throckmorton County	1,000	1,000
Young County	8,250	7,900
Others	750	600
Totals	55,250	54,850

WEST TEXAS

Crane-Upton Counties	74,800	75,300
Crockett County	2,900	2,800
Howard County	3,850	4,000
Jones County	1,300	1,300
Mitchell-Scurry Cos.	3,100	3,150
Pecos County	50,000	51,950
Reagan County	18,800	19,100
Winkler County	230,500	212,350
Others	1,900	1,850
Totals	387,150	371,800

EAST CENTRAL TEXAS

Corsicana-Powell	11,800	11,900
Currie	500	500
Mexia	7,400	7,400
Nigger Creek	1,350	1,350
Richland	500	500
Wortham	2,050	2,050
Totals	23,600	23,700

SOUTHWEST TEXAS

Dale	1,100	1,250
Laredo District	6,200	6,400
Luling	13,600	13,450
Lytton Springs	1,500	1,400
Somerset	700	700
Others	400	400
Totals	23,500	23,600
Tt'l Tex. (Outside Gulf Coast)	632,650	612,650

TEXAS GULF COAST

Barbers Hill	550	600
Batson	1,450	1,450
Big Creek	1,400	1,550
Blue Ridge	6,950	5,700
Boling	2,200	1,750
Damon Mound	1,000	900
Goose Creek	7,300	7,200
Hull	10,500	11,200
Humble	1,150	1,200
Orange	4,700	4,800
Pierce Junction	10,000	10,300
Saratoga	1,100	1,100
Sour Lake	3,450	3,450
South Liberty	3,600	4,500
Spindle Top	32,000	33,400
West Columbia	8,300	9,000
Others	2,300	2,500
Totals	97,950	100,600
Texas Total	730,600	713,250

OKLAHOMA

North Braman	2,950	2,950
South Braman	1,800	1,800
Blackwell	3,650	3,650
Hubbard	2,900	2,950
Thomas	1,450	1,450
Tonkawa	14,250	14,550
Garber	8,600	8,600
Burbank	36,700	37,750
Osage (outside Burbank)	28,900	30,100
Watchorn	800	750
Cushing	20,350	20,900
Yale Jennings	9,050	8,650
Davenport	2,150	2,150
Bristow Slick	23,950	24,300
North Okmulgee	15,500	15,500
Lyons Deaner	6,600	7,000
Stroud	1,100	1,100
Cromwell	9,900	9,900
Papoose	4,750	4,750
Wewoka	7,700	7,650
Seminole	54,150	55,500
Searight	15,150	16,350
Earlsboro	93,700	93,450
Duncan District	6,550	6,550
Graham	5,700	5,800
Healdton	14,000	14,000
Scholem Alchem	14,100	14,500
Bowlegs	72,250	73,350
Little River	38,450	41,750
Fox	1,750	1,750
Hewitt	8,650	8,650
Others	82,150	82,450
Totals	609,650	620,550

CALIFORNIA

Santa Fe Springs	37,000	37,000
Long Beach	170,000	158,500
Huntington Beach	55,500	55,500
Torrance	18,500	18,500
Dominguez	12,500	12,500
Rosecrans	6,500	6,500
Inglewood	29,000	29,500
Midway-Sunset	73,500	73,500
Ventura Avenue	49,000	51,000
Seal Beach	38,500	39,000
Others	131,00	131,000
Totals	621,000	612,500

KANSAS

Greenwood County	29,400	29,500
Florence-Covert	1,400	1,400
Peabody-Ebling	3,650	3,650
Eldorado-Towanda	14,100	14,100
Augusta-Fox Bush	4,050	4,100
Rainbow Bend	1,650	1,650
Russell	2,900	2,900
Churchill	11,800	11,900
Oxford	17,100	16,950
Others	24,950	25,200
Totals	111,000	111,350
Homer	4,450	4,450
Haynesville	6,300	6,350

NORTH LOUISIANA

	April 28	April 21
Caddo Light	10,150	10,500
Caddo Heavy	3,850	3,800
DeSoto-Red River	4,150	4,150
Elm Grove	550	550
Bellevue	1,100	1,100
Cotton Valley Light	3,650	4,500
Cotton Valley, Heavy	4,400	4,450
Urania	7,300	7,350
Pleasant Hill	600	550
Totals North Louisiana	46,500	47,750

LOUISIANA GULF COAST

Edgerly	1,100	1,100
Evangeline	1,150	1,100
Lockport	4,500	4,650
Vinton	4,650	4,650
East Hackberry	1,900	3,300
Bayou Boullion	500	1,000
Sulphur Dome	2,350	500
Others	250	200
Total Louisiana Gulf Coast	16,400	16,450
Louisiana Total	62,900	64,200

ARKANSAS

El Dorado	5,300	5,500
Champagnolle	3,300	2,800
Smackover Light	7,150	8,150
Smackover Heavy	57,950	63,800
Stephens	1,050	1,050
Nevada	1,400	1,500
Lisbon	2,250	2,250
Others	100	100
Totals	78,500	85,200

MOUNTAIN STATES

WYOMING

Salt Creek	41,450	40,800
Grass Creek	2,500	2,600
Elk Basin	1,200	1,100
Big Muddy	2,750	2,700
Lost Soldier	5,200	4,750
Rock River	2,650	2,450
Lance Creek	750	750
Others	3,950	3,600
Totals	60,450	58,750

MONTANA

Cat Creek	1,800	1,750
Sunburst	9,500	10,000
Others	150	150
Totals	11,450	11,900

COLORADO

Moffats (Craig)	1,500	1,450
Fort Collins	2,950	2,800
Florence	1,250	1,250
Others	950	850
Totals	6,650	6,350

NEW MEXICO

Table Mesa	350	100
Artesia	1,150	1,150
Hogback	500	500
Rattlesnake	400	250
Others	200	200
Totals	2,600	2,200
Totals Mountain States	81,150	79,200

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky. and N. Y.)	109,000	107,500

PRODUCTION SUMMARY

East of Rockies	1,701,650	1,702,050
United States Total	2,403,800	2,393,750

CRUDE OIL PRICE QUOTATIONS

CURRENT POSTINGS

EASTERN STATES

	May 2
New York Transit	$2.80
Bradford District	2.80
National Transit	2.65
Southwest	2.65
Eureka	2.60
Buckeye	2.35
Macksburg	2.80
Gaines	2.60
Somerset	1.45
Cabell	1.35
Ragland	.95
Corning, 35-cent grade	1.45
Corning, 25-cent grade	1.55
Keister	1.10

CENTRAL STATES

Illinois	1.50
Indiana	1.32
Lima	1.55
Plymouth	1.23
Princeton	1.50
Waterloo	1.35
Wooster	1.57

WESTERN KENTUCKY

Posted by Stoll Refining Company for crude from Allen, Warren, Franklin, Davies, Barren, All grades	1.50

MID-CONTINENT

Prairie, Sinclair and Gulf

28 to 28.9 gravity	.96
29 to 29.9 gravity	1.01
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.11
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.19
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.25
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.31
38 to 38.9 gravity	1.34
39 to 39.9 gravity	1.37
40 to 40.9 gravity	1.40
41 to 41.9 gravity	1.43
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.49
44 to 44.9 gravity	1.52
45 to 45.9 gravity	1.55
46 to 46.9 gravity	1.58
47 to 47.9 gravity	1.61
48 to 48.9 gravity	1.64
49 to 49.9 gravity	1.67
50 to 50.9 gravity	1.70
51 to 51.9 gravity	1.73
52 and above	1.76

NORTH AND CENTRAL TEXAS

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona and Lytton Springs Crude

(Humble Oil and Refining Company and Gulf Refining Company)*

	May 2
Below 25 gravity	.76
25 to 25.9 gravity	.81
26 to 26.9 gravity	.86
27 to 27.9 gravity	.91
28 to 28.9 gravity	.96
29 to 29.9 gravity	1.01
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.11
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.19
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.25
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.31
38 to 38.9 gravity	1.34
39 to 39.9 gravity	1.37
40 to 40.9 gravity	1.40
41 to 41.9 gravity	1.43
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.49
44 to 44.9 gravity	1.52
45 to 45.9 gravity	1.55
46 to 46.9 gravity	1.58
47 to 47.9 gravity	1.61
48 to 48.9 gravity	1.64
49 to 49.9 gravity	1.67
50 to 50.9 gravity	1.70
51 to 51.9 gravity	1.73
52 and above	1.76

*Humble's postings stop at 44 and above, at $1.52.

NORTH AND CENTRAL TEXAS

(The Texas Company and Magnolia Petroleum Company)*

24 to 24.9 gravity	.76
25 to 25.9 gravity	.81
26 to 26.9 gravity	.86
27 to 27.9 gravity	.91
28 to 28.9 gravity	.96
29 to 29.9 gravity	1.01
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.11
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.19
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.25
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.31
38 to 38.9 gravity	1.34
39 to 39.9 gravity	1.37
40 to 40.9 gravity	1.40

	May 2
41 to 41.9 gravity	1.43
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.49
44 to 44.9 gravity	1.52
45 to 45.9 gravity	1.55
46 to 46.9 gravity	1.58
47 to 47.9 gravity	1.61
48 to 48.9 gravity	1.64
49 to 49.9 gravity	1.67
50 to 50.9 gravity	1.70
51 to 51.9 gravity	1.73
42 and above	1.76

*Magnolia Petroleum Company posts the schedule below on oil below 30 gravity and from 30 gravity up to 31.9. Beginning with 32 to 32.9, Magnolia's posting is the same as that of The Texas Company.

Below 30 gravity	.75
30 to 30.9 gravity	.90
31 to 31.9 gravity	1.05

Corsicana heavy is $1.00 posted by Magnolia.

SOUTH TEXAS

Mirando	1.00

SOMERSET

Grayburg

Below 33 gravity	1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 and above	1.17

GULF COAST

Grade "A" all companies	1.20
Gulf Coast Light Oil, below 25	1.15
25 to 25.9 gravity	1.17
26 to 26.9 gravity	1.19
27 to 27.9 gravity	1.21
28 to 28.9 gravity	1.23
29 to 29.9 gravity	1.25
30 to 30.9 gravity	1.27
31 to 31.9 gravity	1.29
32 to 32.9 gravity	1.31
33 to 33.9 gravity	1.33
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.37
36 to 36.9 gravity	1.39
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.43
39 to 39.9 gravity	1.45
40 and above	1.47

*Humble Oil & Refining Company's postings on Gulf Coast Light stop at 35 to 35.9. Its price on all crudes above 35 to $1.37 per barrel.

Magnolia Petroleum Company's postings stop at 31 to 31.9.

CALIFORNIA CRUDE OIL PRICES AT THE WELL

Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 gallons in fields indicated.)

Gravity (degrees)	Signal Hill	Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Torrance	Richfield	Whittier La Harbra	Montebello	Coyotte Hill	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler
14-14-9	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .75	$ .75	$ .75	$ .75	$ .75	$ .75
15-15-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
16-16-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
17-17-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
18-18-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
19-19-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
20-20-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	..	.77	.77	.77	.76	.76
21-21-9	.86	.86	.86	.86	.86	..	.86	.86	.85	.85	.86	.85	..	.79	.79	.79	.77	.77
22-22-9	.87	.87	.87	.87	.87	..	.87	.87	.85	.85	.87	.85	..	.81	.81	.81	.78	.78
23-23-9	.88	.88	.88	.88	.88	..	.88	.88	..	.85	.88	.85	..	.83	.83	.83	.79	.79
24-24-9	.89	.89	.89	.89	.89	..	.89	.89	..	.85	.89	.85	..	.85	.85	.85	.80	.80
25-25-9	.90	.90	.90	.90	.90	.90	.90	.90	..	.86	.90	.86	..	.87	.87	.87	.81	.81
26-26-9	.92	.92	.92	.92	.92	.92	.92	.92	..	.87	.91	.87	..	.89	.89	.89	.83	.82
27-27-9	.94	.94	.94	.94	.94	.94	.94	.94	..	.88	.92	.88	..	.91	.91	.91	.85	.83
28-28-9	.96	.96	.96	.96	.96	.96	.96	.96	..	.89	.93	.89	..	.93	.93	.93	.87	..
29-29-9	.98	.98	.98	..	.98	.98	..	1.00	..	.91	.95	.93	..	.99	.99	.99	.91	..
30-30-9	1.00	1.00	1.00	..	1.00	1.00	..	..	..	..	..	.95	..	1.02	1.02	1.02	.93	..
31-31-9	1.03	1.03	1.03	..	..	1.03	..	..	..	..	..	.97	..	1.05	1.05	1.05	.95	..
32-32-9	1.06	1.06	1.06	..	..	1.06	..	..	..	..	..	.99	..	1.08	1.08	1.08	.97	..
33-33-9	..	..	..	..	..	1.09	..	..	..	..	..	1.01	..	..	..	1.11	.99	..
34-34-9	..	..	..	..	..	1.12	..	..	..	..	..	1.03	..	..	..	..	1.01	..
35-35-9	..	..	..	..	..	1.15	..	..	..	..	..	1.06	..	..	..	..	..	..
36-36-9	..	..	..	..	..	1.18	..	..	..	..	..	1.09	..	..	..	..	..	..
37-37-9	..	..	..	..	..	1.21	..	..	..	..	..	1.12	..	..	..	..	..	..
38-38-9	..	..	..	..	..	1.24	..	..	..	..	..	1.15	..	..	..	..	..	..
39-39-9	..	..	..	..	..	1.27	..	..	..	..	..	..	..	..	..	..	..	..
40-40-9	..	..	..	..	..	1.30	..	..	..	..	..	..	..	..	..	..	..	..
41-41-9	..	..	..	..	..	1.33	..	..	..	..	..	..	..	..	..	..	..	..
42-42-9	..	..	..	..	..	1.36	..	..	..	..	..	..	..	..	..	..	..	..

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Atlanta Boston Chicago Houston Kansas City

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	May 2 1928
MARKHAM	
The Texas Company	
All grades	1.00
LULING	
All grades	1.00
PANHANDLE	
GRAY COUNTY	
(Humble Oil and Refining Company, Magnolia Petroleum Company and Gulf Refining Company)	
Below 27 gravity	.60
27 to 27.9 gravity	.65
28 to 28.9 gravity	.70
29 to 29.9 gravity	.75
30 to 30.9 gravity	.80
31 to 31.9 gravity	.85
32 to 32.9 gravity	.90
33 to 33.9 gravity	.93
34 to 34.9 gravity	.96
35 to 35.9 gravity	.99
36 to 36.9 gravity	1.02
37 to 37.9 gravity	1.05
38 to 38.9 gravity	1.08
39 to 39.9 gravity	1.11
40 to 40.9 gravity	1.14
41 to 41.9 gravity	1.17
42 to 42.9 gravity	1.20
43 to 43.9 gravity	1.23
44 and above	1.26
WHEELER COUNTY	
(Humble Oil and Refining Company and Magnolia Petroleum Company)	
Below 29 gravity	.60
29 to 29.9 gravity	.65
30 to 30.9 gravity	.70
31 to 31.9 gravity	.75
32 to 32.9 gravity	.80
33 to 33.9 gravity	.83
34 to 34.9 gravity	.86
35 to 35.9 gravity	.89
36 to 36.9 gravity	.92
37 to 37.9 gravity	.95
38 to 38.9 gravity	.98
39 to 39.9 gravity	1.01
40 to 40.9 gravity	1.04
41 to 41.9 gravity	1.07
42 to 42.9 gravity	1.10
43 to 43.9 gravity	1.13
44 and above	1.16
CARSON-HUTCHINSON COUNTIES	
(Humble Oil and Refining Company, Magnolia Petroleum Company and Gulf Refining Company)	
Below 31 gravity	.60
31 to 31.9 gravity	.65
32 to 32.9 gravity	.70
33 to 33.9 gravity	.73
34 to 34.9 gravity	.76
35 to 35.9 gravity	.79
36 to 36.9 gravity	.82
37 to 37.9 gravity	.85
38 to 38.9 gravity	.88
39 to 39.9 gravity	.91
40 to 40.9 gravity	.94
41 to 41.9 gravity	.97
42 to 42.9 gravity	1.00
43 to 43.9 gravity	1.03
44 and above	1.06
WEST TEXAS	
(Humble, Gulf, Magnolia, The Marland Company and Southern Crude Oil Purchasing Company)*	
Crane- Upton, Crockett, Pecos and Winkler Counties, all grades	.60

*Gulf does not post in Winkler County; Magnolia posts only in Crane and Upton Counties; The Marland Company, post only in Crane, Upton and Crockett Counties; Southern posts only in Crane, Upton and Winkler Counties.

(Magnolia Petroleum Company)	
Mitchell County	$ .80
Howard-Glasscock County (shallow)	.80
Howard-Glasscock County (deep)	.60
Col-Tex Refining Company	
Howard and Mitchell Counties	$ .80
WYOMING-MONTANA	
Wyoming	
Byron	1.33
Ferris	1.60
Elk Basin	1.33
Grass Creek	1.33
Rock Creek	1.25
Lost Soldier	.95
Lance Creek	1.33
Mule Creek	1.10
Notches	.65
Big Muddy	1.25
Osage	1.33
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.33
Lander	.80
Simpson Ridge	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00
Salt Creek	
Midwest Refining Company	
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 and above	1.30
MONTANA	
Sunburst	1.50
Cat Creek	1.33
Lake Basin	2.20
NEW MEXICO	
Artesia	1.00
Hogback	1.38
CANADA	
Oil Springs	2.02
Petrolia	1.95
LOUISIANA-ARKANSAS	
(All Companies)*	
Homer, Haynesville, Caddo, El Dorado, De Soto and Crichton and Cotton Valley**	
Below 28 gravity	.91
28 to 28.9 gravity	.96
29 to 29.9 gravity	1.01
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.11
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.19
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.25
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.31
38 to 38.9 gravity	1.34
39 to 39.9 gravity	1.37
40 to 40.9 gravity	1.40
41 to 41.9 gravity	1.43
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.49
44 to 44.9 gravity	1.52
45 to 45.9 gravity	1.55
46 to 46.9 gravity	1.58
47 to 47.9 gravity	1.61
48 to 48.9 gravity	1.64
49 to 49.9 gravity	1.67
50 to 50.9 gravity	1.70
51 to 51.9 gravity	1.73
52 and above	1.76

*Shreveport-Eldorado's postings stop at above 40 gravity.

**Below 36 gravity, the posting on Cotton Valley is 75 cents. From 36 to 52 and above the regular gravity schedule is followed.

	May 2 1928
STEPHENS	
(All Companies)	
Below 28	.85
28 to 28.9 gravity	.87
29 to 29.9 gravity	.89
30 to 30.9 gravity	.91
31 to 31.9 gravity	.93
32 and above	.95
SMACKOVER	
(All Companies)	
Below 24 gravity	.75
24 and above	.90
Bellevue	1.25
Jennings	1.15
Vinton	1.30
Edgerly	1.30
Starks Dome	1.30
Urania	.75
Calion	.75

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

American Petroleum Institute Figures (Barrels of 42 gallons)

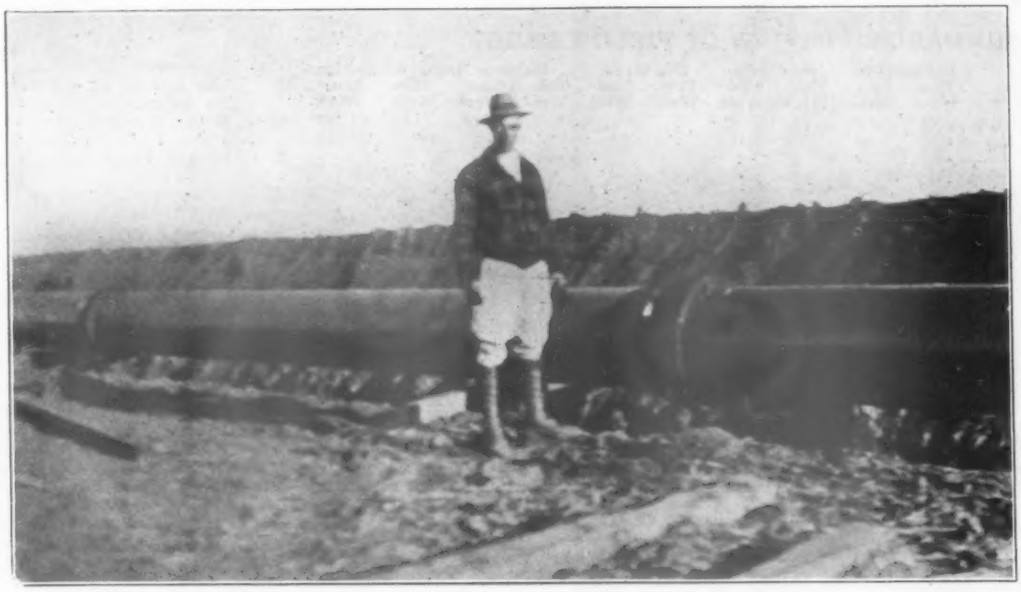
	Week End'd April 21	Week En'd April 14
AT ATLANTIC COAST PORTS—		
Baltimore	223,000	260,000
Boston	77,000	97,000
New York	1,209,000	741,000
Philadelphia	144,000	244,000
Others	70,000	.....
Total	1,723,000	1,342,000
Daily average	246,143	191,714
AT GULF COAST PORTS—		
Galveston District	100,000	100,000
New Orleans and Baton Rouge	169,000	78,000
Port Arthur and Sabine District	.....	.....
Tampa	4,000	.....
Total	273,000	178,000
Daily average	39,000	25,429
AT ALL UNITED STATES PORTS—		
Total	1,996,000	1,520,000
Daily average	285,143	217,143
Daily average four weeks ended	247,071	234,500

RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

American Petroleum Institute Figures (Barrels of 42 gallons)

	Week End'd April 21	Week En'd April 14
AT ATLANTIC COAST PORTS—		
Baltimore	220,000	*51,000
New York	250,000	75,000
Boston	80,000	60,000
Philadelphia	78,000	.....
Others	78,000	*86,000
Total	706,000	272,000
Daily average	100,857	38,857
AT GULF COAST PORTS—		
Daily average	.....	.....
Total Atlantic and Gulf Coast Ports—	706,000	272,000
Daily average	100,857	38,857
Daily average four weeks ended	59,678	42,821
DISTRIBUTION OF TOTAL CALIFORNIA OIL RECEIPTS IS AS FOLLOWS:		
Crude	174,000	59,000
Gasoline	532,000	153,000
Gas oil	.....	60,000
Total	706,000	272,000

*Revised



New Records in Pipe Line Laying

86.7 miles of 22" Dresser coupling pipe in 80 working days with one gang is a recent achievement of this company.

This line was tested to 400 lbs. gas pressure with no leaks.

Just being completed is 99 miles of 10" welded pipe with one gang requiring only 60 working days.

Our modern equipment and efficient organization enable us to do first class work in record time.

Welcome To Dallas

To those attending the Natural Gas Convention in Dallas, May 7-10, we extend greetings and best wishes for a most happy and successful meeting.

WELDED DRESSER SCREW PIPE

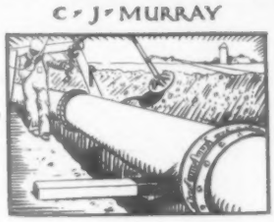
OKLAHOMA CONTRACTING CO.

T. R. JONES, *President* H. A. GUMP, *Sec'y.-Treas.*

THE WELDALINE CO.

C. J. MURRAY

TULSA DALLAS



COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

SUMMARIZED REVIEW OF FIELD RESULTS

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	4	2	3	1	..	..	1	1	166	1,840
California	8	12	6	10	..	..	2	2	8,800	15,375
Colorado	1	..	1	..	..	..	..	..	80	....
Indiana	3	..	1	..	..	..	2	..	70	....
Kansas	29	14	14	5	1	1	14	8	3,785	1,250
Kentucky	34	18	19	16	..	1	15	1	485	760
Louisiana	16	20	10	4	2	10	4	6	3,485	1,860
Michigan	..	9	..	6	..	..	..	3	....	947
Montana	6	5	4	4	1	1	1	..	11,640	5,218
New Mexico	..	3	..	2	..	1	..	..	....	9
New York	..	11	..	11	..	..	..	..	....	24
Ohio	37	13	22	8	6	4	9	1	509	1,430
Oklahoma	77	72	36	29	11	13	30	30	9,470	10,336
Pensylvania	4	53	..	44	3	6	1	3	....	120
Tennessee	8	..	6	..	..	..	2	..	495	....
Texas	129	117	64	52	8	6	57	59	61,623	53,779
West Virginia	28	11	5	3	14	4	9	4	20	8
Wyoming	3	1	3	1	..	..	..	..	640	100
Totals	387	361	194	196	46	47	147	118	101,268	93,056
Increase this week	26	..	..	..	..	..	29	..	8,212	....
Decrease this week	..	..	2	..	1	..	..	..	....	....

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
BUTLER COUNTY—		
Cress, Frank et al, Bryson 1, nec, 26-27-5e	*	3171
CHAUTAUQUA COUNTY—		
Manhattan Oil Co., Payne 1, sec nw nw, 33-32-9e	*	2651
CLARK COUNTY—		
Walker & Walker, Mitchell 1, swc ne, 16-31-23w	*	450
COWLEY COUNTY—		
Lewis Gas Prod. Co., Pearce 1, sec sw se, 30-31-6e	25	2970
Trees Oil Co., Estus 1, sec nw, 12-32-6e	¶2	2491
Durham & Work, Stout 1, nwc se, 19-31-3e	*	2275
Prairie O. & G. Co., Graham 1, sec sw, 10-32-4e	*	3322
Roth & Faurot, Perkins 1, c se, 18-31-5e	*	717
ELK COUNTY—		
Phoenix Oil Co., Mills 4, nec nw nw nw, 23-30-10e	35	2005
Truby et al, Silger 1, sec ne se, 25-30-10e	30	1593
La Dow et al, Miller 1, nec se sw, 21-29-12e	*	1730
Pennock Oil Co., Faulk 1, nec sw, 36-30-10e	*	1890
Harvey et al, Flack 1, swc nw, 21-30-11e	*	1575
Union Gas Corp., Webb 23, c ne nw, 14-31-10e	*	1992
GREENWOOD COUNTY—		
Darby Pet. Co., Fankhouser 7, nec sw sw, 24-22-12e	200	1679
Empire O. & G. Co., Ott 4 "C", swc ne ne, 26-22-12e	150	1684
Darby Pet. Co., Schwab 10, c s l ne se nw, 30-22-13e	400	1739
Skelly Oil Co., Lue 1, nwc se ne, 32-22-13e	30	1829
Murphy et al, Olson 2, nwc sw sw se, 6-25-9e	150	2129
Mohawk Oil Co., Grundy 2, nec sw nw, 7-27-11e	150	1887
McCullough Oil Co., Roglin 2, c w l sw sw, 10-25-13e	*	1695
Stark et al, Stanley 1, nec, 1-26-10e	*	2034
MARION COUNTY—		
Reynolds et al, Zinn 1, nec nw ne ne, 22-17-4e	200	2435
Phillips Pet. Co., Peterson 4, sec sw nw, 23-17-4e	150	2410
SUMNER COUNTY—		
Roxana Pet. Corp., Barnes 1 nec sw sw, 14-32-2e	390	2104
Barnsdall Oil Corp. et al, Weinrich 5, nec nw nw nw, 23-32-2e	975	2125
Barnsdall Oil Corp., Wenrich 7, c w l nw nw, 23-32-2e	900	2155
WOODSON COUNTY—		
Fees et al, Tannerhill 1, sec sw, 4-24-16e	*	1505
Southern Kansas Gas Co., Morgan 1, swc, 8-24-17e	*	1480

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
CARTER COUNTY—		
Magnolia, Brooks 1, sw nw ne, 11-2s-3w	40	4667
Gabriel 2, se nw sw, 23-1s-3w	75	2760
CREEK COUNTY—		
Jackson & Wise, Thomas 3, swc nw, 13-17-10e	*	1926
Pensey Oil Co., Cain 3, cwl ne ne, 18-17-7e	*	2992
Gled Oil Co., West 1A, nec sw nw, 17-18-9e	*	3455
Murry Oil Co. et al, Murrell 1, swc, 8-19-9e	*	2989
GRADY COUNTY—		
Carter Oil Co., Miles-Keran, nec nw se, 21-3n-5w	250	1765
Commerce Dev. Co., Pond 1, ne nw sw, 13-4n-8w	¶25	2365
Magnolia, Smith 6, sw nw ne, 35-5n-8w	¶25	2379
Kipp et al, McCaughtry 3, sec nw, 35-5n-8w	¶26	2340
Meridian Gas Co., Farwell 1, swc ne se, 23-5n-8w	¶25	2060
Gypsy Oil Co., Kayser 6, sec sw nw, 16-3n-5w	*	2595
KAY COUNTY—		
John Goins et al, Bryn 1, c w l e½ sw nw, 7-28-1e	¶1	770
Blackwell O. & G. Co., Heighley 2, c se ne, 29-25-1w	*	1500
Wentz Oil Corp., Williams 1, ne se ne, 7-27-2e	*	554
Argabright Oil Co., Treadway 1, c e l nw nw, 11-27-1w	*	665
Farmers' Benefit O. & G. Co., Nichols 1, nwc sw, 14-28-1w	*	890
MUSKOGEE COUNTY—		
Sioux Oil Co., Jordan 2, ne se se, 14-13-18e	¶3	555
F. Walters, Townlot 1, c s l se ne sw, 6-14-19e	40	528
Ragland et al, Townlot 2, se ne sw, 6-14-19e	30	528
Olean Pet. Co., Townlot 1, se ne sw, 6-14-19e	40	526
C. A. Lovelace et al, Townlot 1, se ne nw, 6-14-19e	90	526
Ark-Add Oil Co., Townlot 4, se ne sw, 6-14-19e	40	535
Bryan & Emery, Barnett 1, sec sw se ne, 8-15-15e	150	1623
P. Boyle et al, Barnett 6, c n l ne se, 8-15-15e	125	1624
S. Threlkeld, Cobb 1, nwc sw, 6-14-19e	*	893
W. J. Metzger et al, Crittenden 7, nwc sw ne se, 6-14-19e	*	828
O. F. Butler, Townlot 1, sec sw nw, 6-14-19e	*	780
J. L. Slusher, Fewell 1, cwl sw nw, 6-14-17e	*	1782
W. B. Pine et al, Simmons 1, nwc ne nw, 9-15-15e	*	1727
OKFUSKEE COUNTY—		
Future Dev. Co., Sango 1, c nw se, 20-10-9e	¶7	3100
Schermerhorn et al, Norris 1, c se nw, 20-10-9e	¶4	3181
E. L. Robinson, Berryhill 2, nec sw, 35-11-9e	15	1476
Edgewood Oil Co., McKellop 1, nwc, 5-13-10e	*	3512
OKMULGEE COUNTY—		
A. G. Hazlett, Jones 5, nwc ne nw, 33-13-13e	¶13	1493
J. E. Wallace, Colbert 8, nwc ne se, 14-14-14e	12	1742
B. Morgan, Grayson 2, cnl ne sw, 14-11-13e	*	1570
OSAGE COUNTY—		
Prairie O. & G. Co., Stewart 5, csl nw, 21-27-6e	750	2935
Kewanee O. & G. Co., 12, ne sw nw, 34-27-6e	14	2919
Phillips Pet. Co., 9, ne sw se, 17-27-6e	300	2960
8, se nw se, 17-27-6e	600	2972
L. C. Duffield 4, nw sw nw, 35-29-10e	7	1769
Clement O. & G. Co. 1, nwc se nw, 23-20-10e	*	....
PAYNE COUNTY—		
Pure Oil Co., Ramsey 2, swc ne se, 7-18-4e	*	4458
PONTOTOC COUNTY—		
W. C. Hughes et al, Gann 1, sec nw, 15-4n-7e	¶3	1110
Westheimer & Daube, Milner 1, sec, 8-5n-8e	310	2466
Bowles et al, Rayborn 1, swc se, 35-4n-6e	*	1415
Homaokla Oil Co., McCall 8, nw ne se, 17-5n-8e	*	2880
POTTAWATOMIE COUNTY—		
Pierce Oil Corp., Sanders 1, nwc sw, 20-7-4e	100	4068
Continental Oil Co., Neghnguit 4, se ne nw, 19-7-4e	205	3850
SEMINOLE COUNTY—		
Prairie O. & G. Co., Varnum 1, nw sw sw, 5-9-6e	30	4235
The Texas Co., Hyde 2, sw nw sw, 8-5-8e	100	2408
Hyde 1, se nw sw, 8-5-8e	520	2391
Mid-Continent Pet. Corp., Fleet 9, se nw se, 7-5-8e	750	2475
Fleet 3, ne nw se, 7-5-8e	78	2498
Carter Oil Co., Phillips 1, nw ne nw, 18-6-8e	85	3962
Sinclair O. & G. Co., Jones 5, nw se se, 9-8-6e	75	4534
Carter Oil Co., Mecco 1, sec ne, 9-8-6e	145	4179
Magnolia, Hyde 1, nw se nw, 13-9-5e	2085	4420
The Texas Co., Anderson 8, ne nw se, 2-9-5e	495	4386
Shaffer O. & R. Co., Clark 7, nw sw se, 1-9-5e	800	4378
Prairie O. & G. Co., Alderidge 3, swc se, 34-8-6e	*	4890
Crosbie Sewell 2, sw ne sw, 15-8-6e	*	3297
Tidal Oil Co., Harjoche 3, sw ne sw, 10-8-6e	*	4730
Twin State Oil Co., Barker 6, sw ne, 12-9-5e	*	4393
STEPHENS COUNTY—		
Schermerhorn et al, Shields 3, nw ne sw, 13-1s-4w	390	3761
Skelly Oil Co., Krebbs 6, swc se, 13-1s-4w	685	2772
Scott & Arrington, Brown 1, nec sw nw, 19-22-7w	¶7	1500
Mudge Oil Co., Spears 7, nec se se nw, 23-1s-5w	4	666

(Continued on page 90)

Keeping out poor welds

The best welds can be made only with the best welding rod. It is a plain case of metallurgy.

That's why Oxweld welding rod is manufactured to meet rigid specifications. Not only is chemical analysis specified but actual welding tests are made with every lot of rod before it is stamped with the Oxweld trademark.

OXWELD ACETYLENE COMPANY

Unit of Union Carbide and Carbon Corporation

NEW YORK CITY, 30 E. 42d St. UCC STOCKS IN 41 CITIES

CHICAGO, 3642 Jasper Place SAN FRANCISCO, 8th & Brannan Sts.

IN CANADA, Dominion Oxygen Company, Ltd., Toronto

Oxweld

WELDING AND CUTTING APPARATUS

Company, Well and Location	Initial Production Bbls.	Depth
Schermerhorn et al, Russell 1, ne nw se, 111-1s-4w	*	3506
TULSA COUNTY—		
Glidden Oil Corp., Jones 2, swc ne ne, 15-19-11e	30	1703
Short & Maness, Stanwaite 1A, nec se nw, 15-18-12e	*	2225
Holmes et al, Cooks 1, nwc sw, 20-19-10e	*	3202
WAGONER COUNTY—		
Boyd & Hanks, Pressley 4, cel sw nw, 7-18-15e	5	1294
J. H. Scriba, Cane 4, sec nw nw sw, 30-17-18e	*	620
Boyd & Hanks, Pressley 3, c n l sw nw, 7-18-15e	*	1323
Robinson et al, Island 1, nwc sw, 21-19-16e	*	565

EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
GREENE COUNTY—		
Manufacturers Light & Heat Co., Lockhard 1	*	....
Orndoff & Co., Rice 1	¶¼	....
J. J. Vanvorhes, Winfred Johns 1	¶1¼	....
WASHINGTON COUNTY—		
A. V. Lewis & Co., J. Moer 1	¶1	....

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
CALHOUN COUNTY—		
W. H. Bickel, Dennis 2	*	....
Morris-Marshall 1	¶2	....
Bennett 1	*	....
Hope Nat. Gas Co., Stalnaker 1	¶¾	....
A. Hardman 1	¶2	....
BOONE COUNTY—		
United Fuel Gas Co., Horse Creek Coal 17	¶¾	....
Pure Oil Co., Federal Coal 30	¶1	....
Yawkey O&G Co., Pond Fork Coal 1	¶¼	....
Hope Nat. Gas Co., Bruwell Sias 1	¶¼	....
ROANE COUNTY—		
United Fuel Gas Co., Stump 1	*	....
Heck Oil Co., Conley 13	10	....
RITCHIE COUNTY—		
West Fork Oil Co., Andrews 3	4	....
Captain Davis & Co., Flesher 2	¶½	....
KANAWHA COUNTY—		
South Penn Oil Co., Bannister Heirs 7	2	....
Bannister Heirs 11	2	....
WIRT COUNTY—		
Roberts Bros., Rathbone 158	2	....
Dailey Oil Co., Badgett 2	*	....
CABELL COUNTY—		
H. C. Zogg & Co., Vance 1	¶½	....
United Fuel Gas Co., Davis 1	¶¼	....
WETZEL COUNTY—		
Manufacturers Light & Heat Co., Fee 1	*	....
Carnegie Nat. Gas Co., Mace 1	*	....
LINCOLN COUNTY—		
L. R. Sweetland, Woodell 31	¶½	....
MINGO COUNTY—		
Public Gas Corp., Closterman 22	¶1½	....
MARION COUNTY—		
Carnegie Nat. Gas Co., Hahurst 3	¶¼	....
LEWIS COUNTY—		
Jane Lew Gas Co., Propet 1	¶2	....
GILMER COUNTY—		
Satterfield & Co., Gardner 2	*	....
WOOD COUNTY—		
L. P. Bickel & Son, Ewing 1	*	....
DODDRIDGE COUNTY—		
G. H. & J. E. Trainer, Maxwell 1	*	....

TENNESSEE

Company, Well and Location	Initial Production Bbls.	Depth
CLAY COUNTY—		
H. Z. Clark, Thurman 1	240	654
Clark Hill Oil Corp., Stone Hrs. 1	50	660
Carnahan Oil Co., Kimes 1	50	643
Reese & Edwards, Stamps 1	30	....
Coe & Co., Overstreet 1	25	....
Ackerman & Co., Langford 1	*	550
H. L. Ogle & Co., Wilburn 1	*	600
JACKSON COUNTY—		
Blick & Blick, Hawkins 11	100	....

INDIANA

Company, Well and Location	Initial Production Bbls.	Depth
GIBSON COUNTY—		
Big Four O. & G. Co., Jones 1	70	1672
PIKE COUNTY—		
Miller, Davis & Co., Wilson 4	*	1428
SULLIVAN COUNTY—		
Hill & Co., Harris 1	*	2600

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
WOOD COUNTY—		
C. A. Browning, Patterson 20	40	1364
SHELBY COUNTY—		
Ohio Oil Co., Dapore 1	*	1327

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
WASHINGTON COUNTY—		
M. B. Worthington & Co., Coots 5	5	....
Pure Oil Co., Breckenridge 1	*	....
Were & Schramm, Palmer 1	1	....
Preston Oil Co., Watterson-Smith 1	*	....
Charles Dailey & Co., Roland 2	2	....
Henderson Oil Co., Berga 1	1	....
Shanklin Bros. & McMahon, McMahon 4	*	....
J. T. Knowlton & Co., Myers 5	*	....
MONROE COUNTY—		
T. J. Kremer & Co., Cree 11	2	....
Gold Crown O. & G. Co., Chrit 3	2	....
William McClure & Co., Schalabaugh 1	*	....
NOBLE COUNTY—		
F. Markey & Co., Bonar 1	¶1½	....
Joseph Sailing & Co., Brotton 5	12	....
BELMONT COUNTY—		
Ohio Fuel Sup. Co., Boush 3	¶1	....
First 1	¶1	....
JEFFERSON COUNTY—		
Needer & Co., Penwell 1	*	....

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
LICKING COUNTY—		
Farmer & Rugg, Wright 1	9	....
Wright 2	8	....
Hope Construction & Ref. Co., Prouty 1	20	....
McTurf 1	*	....
Shaw 2	15	....
Detex O. & G. Co., Cotterman 2	5	....
Adams & Moore, Ryan 2	¶1¼	....
George H. Long, Dwiggins 4	2	....
C. E. Settles, Settles 5	3	....
W. L. Brown & Co., Chapin 4	10	....
Sterl C. Brown & Co., Noland 1	16	....
PERRY COUNTY—		
Scott Howell & Co., Winter 1	245	3495
Wisher & Co., Brown 1	*	3720
Chartiers Oil Co., Hocking Products, 208	36	....
CUYAHOGA COUNTY—		
Reeve & Laubsher, Pond 1	15	....
FAIRFIELD COUNTY—		
Frank C. Linton, McCullough 1	10	....
ATHENS COUNTY—		
Bowman O. & G. Co., Dowler 1	¶1¼	....
J. A. Ronshausen & Co., Wood 1	¶¾	....
GUERNSEY COUNTY—		
Preston Oil Co., Dennis 2	50	3690

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
BARREN COUNTY—		
White & Sandals, Pedigo 3	40	....
Nichols 26	10	....
Wood Oil Co., Pace 8	5	....
Pace 9	5	....
Sampson Oil Co., Jones 14	*	....
Sandals & Co., Shirley, 1, 2	*	....
Esslinger Oil Co., Glass 8	40	....
Morton 1	3	....
Morton 2	3	....
A. W. Ziegler, Bray 2, 3	*	....
J. W. Porter & Co., Wheeler, 1, 2	*	....
Norris Bros & Co., Tucker 1	*	....
Frazure, Painter & Co., Vance 1	*	....
R. B. Taylor, Clark 1	*	....
WARREN COUNTY—		
Hayes & Norris, Morgan 5	6	531
A. B. T. Oil Co., Deathridge 4	*	1058
OHIO COUNTY—		
J. M. Meredith & Co., Kelly Hrs. 2	50	434
S. H. Russell & Co., Kelly 6	*	699
J. T. Hare & Son, Howard 3	5	360
George Randolph, Taylor 1	*	....
Boston-Southwestern Oil Co., Wilson 7	50	402
Jolly Oil Synd., Gil Jolly 5	35	....
Barnard-Reil Oil Co., Whitehouse 1	*	....
DAVIESS COUNTY—		
Miller & Damron, Tyler 1	100	....
Fred Estes & Co., Massie 1	*	....
CALHOUN COUNTY—		
Edward Murray, Mitchell 1	*	1385
HANCOCK COUNTY—		
Lang-Smith Co., McBride 1	*	706
WAYNE COUNTY—		
John Dillon, Burnett 2	50	....
J. C. Blair & Co., Gregory 5	*	....
ESTILL COUNTY—		
Waco Oil Co., Rawlins 16	3	....
WOLFE COUNTY—		
Amp Burnett, Bush 2	35	....
Reno Oil Co., Spencer 2	15	....
JOHNSON-MAGOFFIN COUNTIES—		
Dora Fairchilds, Wagner 1	20	....
ELLIOTT COUNTY—		
G. D. Miller, Trustee, Oliver 1	10	....

MOUNTAIN STATES

WYOMING

Company, Well and Location	Initial Production Bbls.	Depth
OREGON BASIN—		
Orchard Oil Co., Rue 1, sw¼ 28-50-100	500	3890
FOUR BEAR—		
Honolulu Cons. Oil Co., 1, 29-48-103	40	3270
UINTA COUNTY—		
Wilcox & Henley, se 3-14n-118	100	756

MONTANA

Company, Well and Location	Initial Production Bbls.	Depth
Latah-Idaho Pool, Riddel 1, se 19-32-1w	¶6	1525
General Oil Co., Wilcox 2, nw 8-34-1w	*	1408
Calif. Pet. Corp., nw se, 27-35-4w	40	1500
Dakota-Montana, nw 17-34-1w	3000	1395
Hannah Porter, Muroney 1, 8-34-1w	100	1365
Ethridge-Steel 2, 12-34-2w	8500	1600

COLORADO

Company, Well and Location	Initial Production Bbls.	Depth
TOW CREEK—		
Texas Prod. Co., Henry Dennis 1, ne 18-6n-86	80	3010

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
LONG BEACH—		
Shell Co., Alamitos 29	1600	6453
Calif. Pet. Corp., Lewis 2	3000	6702
Rayana Oil Co., 1	1600	5582
Herndon Pet. Corp. 4	1100	6320
Rainbow Pet. Co., Dutcher 12	500	6283

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
UNION COUNTY—		
Magnolia, Cranston 4, 19-17-14	6	2164
Phillips et al, Johnson 3, 34-15-15	125	1984
Roxana, Murphy 1, 9-16-15	35	2396

LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
BOSSIER PARISH—		
Arkansas Nat. Gas Co., Crawford 1, 6-22-11	¶32	2696
Delaware-Louisiana Dev. Co., Bollinger 2, 38-23-11	¶36	3064
G. W. Wetherbee, Smith 2, 23-19-11	¶1/5	396
CADDO PARISH—		
Haynes Bros., Spell 1, 15-21-15	10	3911
Shreveport Oil Corp., Muslow 2, 32-21-15	50	2127
OUACHITA PARISH—		
Hatcher & Evans, Fee 7, 21-19-4e	¶3½	2208
RICHLAND PARISH—		
W. C. Feazel, Duff 1, 21-16-6e	¶53½	2440
WEBSTER PARISH—		
Magnolia, Cole 1, 27-21-10	¶5	4729

SOUTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
VINTON—		
Vinton Pet. Co., Gray 62	75	2375

TEXAS GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
BATSON—		
Capitol Oil Co., Hodges 10	60	3890
BLUE RIDGE—		
Blakely & Means, Blakely 1	*	3540
Cunningham Prod. Co., Blakely 1	175	3125
Gordon & Sharp, Blakely C-2	1800	1950
BIG CREEK—		
Gulf Prod. Co., Davis 39	*	4140
HIGH ISLAND—		
Gulf, G. E. Smith A-2	250	2850
GOOSE CREEK—		
Gulf, Tabb A-16	40	3475
Humble, Gaillard 51	75	2150
ORANGE—		
Rycade, State E-13	*	5690
PIERCE JUNCTION—		
Rio Bravo Oil Co., Bender 8	100	3330
Moody Corp., Whitehead A-1	2500	4750
Shaw et al, Fitzsimmons 2	1500	4425
WEST COLUMBIA—		
Gulf, Tomm Hogg et al 1	150	2910
SPINDLE TOP—		
Gulf, Oakwood Realty Co. 13	300	5535

TEXAS PANHANDLE

Company, Well and Location	Initial Production Bbls.	Depth
GRAY COUNTY—		
Empre G&F Co., S. A. Cobb 1-A	¶5	3137
T. Cobb 1-B	¶22	2633
Gulf Prod. Co., Bowers 5-A	85	3225
Guernsey Oil Co., McKinney 2	70	3320
Phillips Pet. Co., Davidson-Myson 2	40	3071
Skelly Oil Co., C. W. Bradford 1	80	3325
Sullivan et al, Chapman 1-A	¶23	3014
Sun Oil Co., W. Jackson 1	120	3150
The Texas Co., Thut 1	¶11	4375
ARMSTRONG COUNTY—		
United Oil & Trust Co., J. P. Reck 1	*	3780
HUTCHINSON COUNTY—		
Dixon Creek Oil Co., Burnett 1	25	3260

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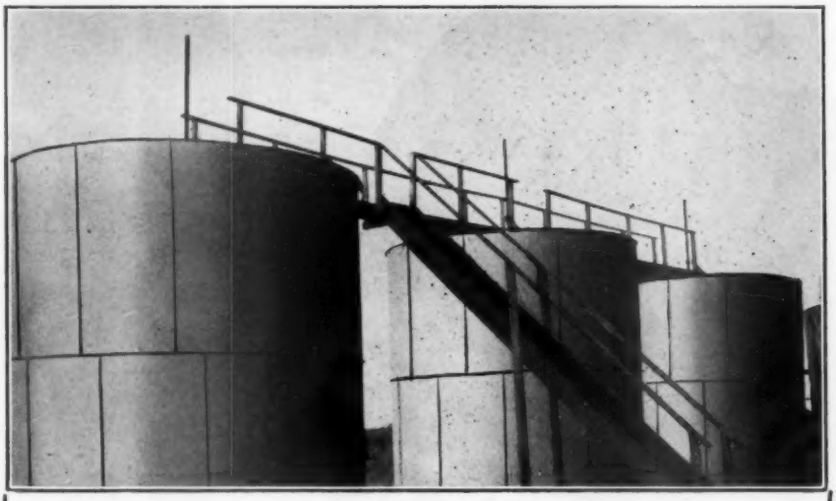

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MALONEY

"ALONE"

WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
JONES COUNTY—		
Mid-West Explo. Co., S. Phillips 1	15	2472
PECOS COUNTY—		
Grayburg Oil Co. et al, Collins 3...	40	1096
Humble O&R Co., Smith 7	365	1693
McMan & Marland Oil Co., Yates 16	10,000	1103
Mid-Kansas-Transcontinental, Smith-Taylor 9	12,000	1326
UPTON COUNTY—		
Humble O&R Co., Ricker 8	225	2272
WINKLER COUNTY—		
Atlantic Oil Prod. Co., Ida Hendrick 3-D	2000	2966
Ida Hendrick 6-D	7500	2935
Grisham-Hunter 4-E	5000	2965
Humble O&R Co., Hendrick 6-B ...	1000	2960
Grisham-Hunter 12	7000	2950
Independent O&G Co., Grisham-Hunter 3	500	2915
Vardeman 5-B	300	2710
Pure Oil Co., Grisham-Hunter 5 ...	5000	2766
Southern-Dixie Oil Co., Ida Hendrick 2-A-T-67	355	3010

CENTRAL WEST TEXAS

BROWN COUNTY—		
Baker et al, Cross 2	*	1100
Calcasieu Oil Co., McMullen 1	*	1568
Cen-Tex Ref. Co., Allcorn 1-B	*	1166
Cranfill-Reynolds, Eubanks 2	400	1225
E. M. Curry et al, Chambers 2	25	1470
Ditto Oil Interests, Bettis 1	*	1627
Gilman & McMurray, Hickman 1-A	350	1272
Henshaw Oil Corp., Bush 9	*	1150
Bush 10	*	1200
Cross 1	130	1091
Humble O&R Co., Munsette 1	15	1132
Jay Hawk Oil Co., Boysen 5	75	1215
Mexana Oil Co., Bradley 1	*	1310
Mitcham et al, Thomason 1	*	1060
CALLAHAN COUNTY—		
Sterling Oil Co., Wheeler 1	10	707
COLEMAN COUNTY—		
Anzac Oil Co. et al, Alexander 1 ..	¶10	2143
Mid-Sun Oil Co., Harris 1	*	2033
Renee Oil Co., Cox 1	*	2005
Rex-Tex Oil Co. et al, Byrd 1	35	1879
The Texas Co., Starnes 1	*	2304
EASTLAND COUNTY—		
Independent O&G Co., Snider 1 ...	*	3515
Operators O&G Co., Williamson 1 .	930	2990
Teatsorth et al, Holcomb 1	40	1347
PARKER COUNTY—		
Woold-Hats Oil Corp., Bell 1	*	3500
SHACKELFORD COUNTY—		
Gibson & Johnson, Davis 1	*	2800
Gilman & McMurray, Reynolds 1..	*	1255
Petroleum Producers Co., Matthews 2	¶5	1153
Roeser-Pendleton, Inc., Cook 17-C ..	†	1145
STEPHENS COUNTY—		
Charter Oil Co., Tomlinson 1	¶3½	1720

NORTH TEXAS

ARCHER COUNTY—		
Bridwell Oil Co., Wilson 3	60	1584
Bridwell & Heydrick, Abercrombie-Taylor 15	10	1350
Consolidated Oil Co., Lisle 2	*	1443
F. P. Cullum et al, Mankins 2	10	671
F. H. Gohle et al, Wilson 5	60	1565
Frank Hutcheson et al, Fee 1	*	1177
Petroleum Prod. Co., Wilson 3-E ...	165	1580
C. L. Richardson et al, Richardson 1	*	1320
F. P. Rose et al, Garvey 1	15	762
C. P. Sheldon et al, Jones 1	*	1651
Young et al, S. Wilson 1	*	1403
BURKBURNETT—		
Ascot Co., Roller 1-C	*	2027
Bridwell & Mayfield, Womack 2 ...	25	1333
T. Lomax et al, McCormick 3	*	1298
ELECTRA—		
Bridwell & Heydrick, Waggoner 23	*	401
W. Hammon et al, McCarty 7-C ..	30	1356
JACK COUNTY—		
W. B. Albright et al, Brothers 1 ..	*	685
Hicks & McNabb, Moore 1	*	350
Radford & Sunday, Jackson 1	*	210
Seabord O&G Co. et al, Cullers 4 ..	*	2011
Watchorn O&G Co., Williams 1	5	5635
K-M-A & IOWA PARK—		
Gulf Prod. Co., S. Mitchell 1	*	2010
H. D. White et al, Donehoo 3	2	397
MONTAGUE COUNTY—		
W. R. Bourland et al, McGaughy 1	*	1631
Roy I. Carter et al, Jones 1	45	802

(Continued on page 111)

WILDCATS FROM ALL SECTIONS

LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
CADDO PARISH—		
The Texas Co., Noel B-13, 14-21-15	*	3979
CLAIBORNE PARISH—		
Rudeseale et al, Meadows 1 ,20-21-7	*	2920
DESOTO PARISH—		
R. O. Roy, Whitaker 1, 4-13-13....	*	1650
UNION PARISH—		
Barbour Oil Co., Tugwell 1, 21-22-1e	*	2434

BIENVILLE PARISH—S. P. Borden's L. & A. 2, 1-15-8, dr 1750 ft. Humble O. & R. Co.'s Anderson 1, 29-18-5, dr 3140 ft.

BOSSIER PARISH—J. R. Bahan's Kilgore 1, 31-23-11, set 6-in at 3040 ft. R. L. Crook's Larkin 9, 14-19-11, lcn. Delaware-Louisiana Dev. Co.'s Bollinger 4, 28-23-11, dr 150 ft. Doern et al's Bollinger 1, 9-22-11, sd 3900 ft. H. S. Goodwin Tr.'s Mercer 1, 21-16-12, sd 1973 ft; Curtis 2, 36-17-13, sd 3257 ft. Wm. Gross et al's Hunter 5, 14-16-12 (formerly Ellis & Markley's) arr to set 6-in at 1898 ft; Stewart 1, 15-18-12, set 10-in at 104 ft. Hamiter et al's Hamiter 1, 10-23-13, sd 1870 ft. D. D. Johnson's Caddo Bossier I. I. Co. 2, 13-17-13, tested dry at 835 ft. La. Oil Ref. Corp.'s Blanton 1, 23-23-12, tested sw at 3087 ft. Magnolia Pet. Co.'s Matlock 1, 25-23-12, set 8⅝-in at 3074 ft. J. S. McCullough's Hodges 6, 25-16-12, wosr 1548 ft. Northwest La. Gas Co.'s Barnett 1, 25-12, set 6-in at 3066 ft. R. O. Roy's Werner 1, 7-17-11, lcn. Triangle Drlg. Co.'s Bulkley 1, 9-20-13, dr 2166 ft. The Texas Co.'s Rose 2, 31-23-11, set 6¼-in at 3069 ft. Walker et al's Antrim 1, 28-22-13, sd 2880 ft.

CADDO PARISH—Bayou State Oil Corp.'s Jolly C-1, 27-22-15, set 6-in at 2202 ft. Bee Oil Co.'s Muslow 1, 29-20-15, set 6-in at 2280 ft. J. W. Burton's Tr.'s Caldwell 8, 18-21-15, dk. Belchic & Laskey's Sharp 4, 10-18-14, dr 2300 ft; Sharp 5, 10-18-16, lcn. W. D. Chew's State 6, 34-21-16, dk. Dixie Oil Co.'s Robertshaw 81, 13-21-15, sd 4148 ft; Robertshaw 91, 14-21-15, wosr 2702 ft; Robertshaw 92, 13-21-15, drill stem stuck 4382 ft; Huckaby 4, 11-21-15, sd 4037 ft. Empire G. & F. Corp.'s Nicholson 1, 33-17-14, tested sw at 2078 ft. Greenwood Prod. Co.'s Cooper & Ellerbe 1, 15-18-14, sd 3234 ft; Cusham & Bridges 1, 15-18-16, set 6-in at 883 ft. Wm. Gross et al's Baker 1, 35-17-16, set 10-in at 62 ft. Haynes Bros.' Sepll 2, 15-21-15, cmtg cavity at 3092 ft. Magnolia Pet. Co.'s W. M. Bell 2, 6-17-16, coring 3184 ft; Dillon 18, 24-21-15, dk; Dillon 21, 23-21-15, lcn; Robertshaw 22, 23-21-15, coring 4049 ft; Hampton A-8, 15-21-15, tested sw at 4039 ft. D. C. Richardson's Youree 6, 30-20-15, sd 2305 ft. Simms Oil Co.'s Glassell 1, 23-20-15, set 10-in at 100 ft. Simplex Oil Co.'s Baird 3, 22-20-15, set 10-in at 105 ft.

CALDWELL PARISH — Greenwood Prod. Co.'s Caldwell L. & T. Co. 1, 27-13-5e, set 15½-in at 175 ft.

CATAHOULA PARISH—Leonard Pet. Co.'s Knott 1, 32-11-8e, dr 4315 ft. The Texas Co.'s Tensas Delta Lbr. Co. B-1, 4-10-6e, arr to set 15½-in at 195 ft.

CLAIBORNE PARISH—ElDorado Chief Oil Co.'s Jones 1, 8-20-7w, dr 1900 ft.

DE SOTO PARISH—American Controlled Oil Co.'s Lanier 2, 5-11-11, sd 2800 ft. Carlton Drlg. Co.'s Stevens 1, 12-11-16, abn 1950 ft. Gulf Ref. Co.'s Jenkins A-35, 35-13-12, set 10-in at 202 ft. R. O. Roy's Lee 1, 23-14-13, dk; Tracy 1, 4-13-13, abn 1650 ft. Reliance Drlg. Co.'s Jones 1, 8-11-14, sd 3018 ft.

EAST CARROLL PARISH—Palmer Corp.'s O'Brien 1, 7-19-11e, set 8¼-in at 883 ft. The Texas Co.'s Boone Live Oak 1, 11-20-2e, lcn.

FRANKLIN PARISH—Pittsburgh O. & D. Co.'s Moore 3, 12-11-6e, sd 2501 ft.

GRANT PARISH—Swope et al's Fee 3, 18-9-1e, sd 1607 ft; Fee 5, 18-9-1e, wosr 1602 ft.

LINCOLN PARISH—H. M. Harrel's Griffin 1, 17-19-1w, tested dry 2251 ft.

MADISON PARISH—W. S. Smith's Yerger 1, 51-16-14e, sd 1700 ft.

MOREHOUSE PARISH—Elbert Pet. Co.'s Morehouse Plg. Co. 1, 40-19-7e, dr 2142 ft. Gulf Ref. Co.'s Higginbotham 1, 42-20-7e, dr 2225 ft. Southern Carbon Co.'s Davis 1, 21-20-4e (formerly Chas. Bennett's) dk. The Texas Co.'s Meyer's 1, 15-22-7e, sd 2530 ft. United Carbon Co.'s Bastrop P. & P. Co. 1, 18-21-6e, set 6-in at 2409 ft; Davis 1, 21-20-4e, set 6-in at 2088 ft.

NATCHITOCHES PARISH — Lawson & Pharris' Crowell Lbr. Co. 1, 22-5-6w, sd 2758 ft.

OUACHITA PARISH—Jordan Drlg. Co.'s Slagle 1, 48-18-4e, dk. Nat. G. & F. Corp.'s McEnery 1, 21-19-4e, rig. Phillips Pet. Co.'s School Fee 1, 16-16-4e, set 8-in at 820 ft. Palmer Corp.'s Cole 4, 26-20-4e, set 8-in at 815 ft. Poineer O. & G. Co.'s Filhiol 2, 11-18-4e, set 8-in at 850 ft. Southern Carbon Co.'s Fee 50, 18-19-4e, set 8-in at 815 ft. Joe White Tr.'s Schmidt 1, 3-15-4e, set 6-in at 2434 ft.

RAPIDES PARISH—Collins Bros.' Allen 1, 25-5-1w, sd 3010 ft. Glenmore Pet. Co.'s Fee 1, 1-2-2w, dr 3800 ft. Minnesota Oil Corp.'s Wetty Marks 2, 13-5-4w, sd 2320 ft.

RICHLAND PARISH—Dixie Oil Co.'s McCoy 1, 29-16-6e, set 6-in at 2300 ft. J. M. Fuller's Boise 1, 33-16-6e, lcn. Feazel & Hemler's Pardue et al 1, 21-16-6e, set 15½-in at 192 ft. W. C. Feazel's Noble 1, 36-16-5e, set 6-in at 2283 ft. Gulf Ref. Co.'s Millsaps 1, 8-17-6e, dr 3477 ft; Rhymes 3, 28-17-6e, dr 3262 ft. Moody & Seagraves' McDonald 1, 9-15-5e, dr 2713 ft; Sartor B-1, 9-16-6e, set 10-in at 790 ft. Natural Gas & Fuel Corp.'s Sartor B-3, 19-16-6e, dk; Sartor B-4, 18-16-6e, lcn; Thomason C-2, 21-16-6e, skidding dk; Thomason C-3, 21-16-6e, pumping in mud to kill off set carter at 2465 ft; Thomason C-4, 21-16-6e, set 6⅝-in at 2272 ft. Ruston Drlg. Co.'s Sartor B-1, set 8-in at 817 ft; Mulern 1, 19-16-6e, set 6-in at 2297 ft; Alexander 1, 4-16-6e, lcn; Etheredeg 1, 28-17-6e, lcn. Southern Carbon Co.'s Sartor 3, 18-16-6e, rig. Sartor Jr. B-1, 9-16-6e, set 8-in at 878 ft. Woodley Pet. Co.'s Osborne 1, 3-17-7e, sd 3131 ft.

SABINE PARISH—Doern et al's Pickering Lbr. Co. 1, 17-4-11, sd 2025 ft. R. L. Gay's Mansfield 1, 15-7-14, dr 2496 ft. Magnolia Pet. Co.'s Hall 1, 23-10-12, coring 3125 ft. The Texas Co.'s Hamlin 1, 28-10-13, dr 2116 ft. Zwolle O. & G. Co.'s Bowman Hicks 7, 11-7-14, dr 3901 ft.

UNION PARISH—Carter et al's Hudson 1, 7-23-1e, sd 700 ft. Industrial Gas Co.'s Lewis 1, 14-20-3e, set 6-in at 2125 ft; Simpson 1, 9-20-3e, set 12½-in at 180 ft; Harris 1, 24-20-3e, dk. Ouachita Nat. Gas Co.'s Hamlin 1, 22-19-1e, tested dry at 2263 ft. R. W. Rhodes' Upshaw 1, 14-23-2w, dk. United Carbon Co.'s Peak 1, 7-20-4e, lcn; Trimble 1, 19-20-4e, rig.

WEBSTER PARISH—Allison et al's Lewis 1, 15-21-10, dr 1000 ft. Arkansas Nat. Gas Co.'s Mitchell 1, 30-23-9, set 6⅝-in at 2682 ft. Dixie Oil Co.'s Cox 1, 15-21-10, set 12½-at 600 ft. Humble O. & R. Co.'s Webb 2, 14-21-10, 4005 ft; Bodcaw A-2, 14-21-10, dk; Davis 6, 14-21-10, set 10¾-in at 2819 ft; Cox 3, 22-21-10, rig. S. A. Lanes Miles 1, 24-17-9, sd 1469 ft. Louisiana O. R. Corp.'s Lindsay 4, 22-21-10, rig; Chrichton 5, 21-21-10, set 12½-in at 451 ft. C. H. Lyons' Porter-Wadley 2, 29-23-9-testing 2732 ft. Morris et al's Lewis 1, 15-23-9, sd 150 ft. Magnolia Pet. Co.'s Camp 1, 36-23-10, set 8¼-in at 2731 ft; Coyle 2, 21-21-10, rig; Cook 1, 22-21-10, dk; Sexton 1, 32-23-9, rig; Mixon 1, 22-21-10, dr on junk 4347 ft; Wise 1, 30-23-9, dk; Aarnes Cox 3, ing 4746 ft; W. Cox 5, 15-21-10, lcn; Mitchell 1, 31-23-9, set 8¼-in at 2652 ft; Merritt 5, 14-21-10, lcn. R. W. Norton's Josey & Massey 1, 27-21-10, will not deepen, restored to production 4657 ft. Ohio Oil Co.'s Haynes 1, 30-23-9, lcn; Bodcaw 39, 15-21-10, set 12½-in at 451 ft; Bodcaw 40, 15-21-10, rig; Bodcaw 41, 15-21-10, dr 400 ft; Hodges 2, 23-21-10, lcn. Palmer Corp.'s Mixon 1, 22-21-10, dr 3034 ft. Woodley Pet. Co.'s Duhe 2, 22-21-10, dk; Cox B-1, 23-21-10, dr to 4690 ft, and arr to test.

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
UNION COUNTY—		
National Consolidated Pet. Corp.'s Fogg 1, 8-16-16	*	2643

BRADLEY COUNTY — Johnson's Adams Southern Lbr. Co. 1, 12-12-12, sd 3138 ft.

CLARK COUNTY—W. M. Henry's Tr.'s Clark 1, 34-9-21, dr 1200 ft. McKenzie Oil Co.'s Eaken 1, 9-11-19, temp abn 633 ft.

CHICOT COUNTY—Joe Crawford et al's Cashion 1, 14-18-2, rig.

COLUMBIA COUNTY — Geo. Dawley's Gnatt 1, 12-17-22, sd 1925 ft. Mitchell et al's Franks 1, 25-19-22, sd 150 ft. Van Hagen Synd.'s Pickler 1, 19-19-22, sd 850 ft; Mason 1, 31-19-22, rig.

DALLAS COUNTY—Dadman et al's Hillman 1, 20-10-13, dr 1690 ft.

GRANT COUNTY—Jones et al's Meeks 1, 5-4-11, sd 1400 ft.

LINCOLN COUNTY—Pine Prairie O. & G. Co.'s Carter 1, 33-10-6, sd 2176 ft.

LITTLE RIVER COUNTY—Grote et al's Allen 1, 2-13-31, as 2941 ft.

MILLER COUNTY — Dave Bruton's Red River Farm 1, 2-17-26, dr 3292 ft. Lenze et al's Dale 3, 23-15-25, sd 3000 ft.

NEVADA COUNTY — Autrey Oil Co.'s Wells & Mays 1, 6-14-20, set 6-in at 1178 ft. McDonald et al's Pelt 1, 9-12-22, sd 2424 ft. J. J. O'Brien's Haynie B-5, 1-14-21, sd 1163 ft.

OUACHITA COUNTY—Little Fay Oil Co.'s Robertson 6, 25-15-16, set 6⅝-in at 2040 ft; Robertson 7, 25-15-16, set 10-in at 61 ft. Ohio Oil Co.'s Cramer 7, 22-15-16, r 3187 ft. F. B. Wood Tr's Spohr 1, 35-15-16, dr 2020 ft.

UNION COUNTY — Arkansas Drlg. Co.'s Carroll 1, 1-17-14, lcn; Rowland 1, 15-17-14, dr 3085 ft; Rowland 2, 15-17-14, lcn. O. W. Estes' Rowland 1, 14-17-14, set 10-in at 83 ft. Grimes Bros.' Hill 2, 7-18-14, rig. H. L. Hunt's Gregory 1, 10-17-14, dk. H. M. Johnson's Tr.'s Kelly 1, 9-17-14, ri. W. R. Keever's Ezell B-3, 12-17-15, set 6⅝-in at 2125 ft; Ezell A-6, 12-17-15, rig. Lion O. & R. Co.'s Hays 8, 4-16-15, set 6⅝-in at 2338 ft; Murphy G-7, 8-16-15, set 10-in at 144 ft. Lyall et al's Stegall 1, 11-17-13, sd 2740 ft. Magnolia Pet. Co.'s Carroll 2, 1-17-14, sd 1500 ft; Carroll 3, 1-17-14, dk; Laney 3, 8-16-16, dk; Laney 4, 8-16-16, dk; Mellon Tr.'s Vanhook 1, 7-18-14, wosr 2206 ft; Bullock 1, 7-18-14, set 6-in at 2157 ft. Mountz et al's Pratt 6, 8-18-15, wosr 2200 ft. C. E. Murdock's Gregory 2, 10-17-14, set 10-in at 167 ft; Murphy 2, 17-16-15, sd 2117 ft. J. O. Moore Tr's Pagan 1, 18-18-11, tested dry at 2640 ft. Magna Prod. Co.'s Rowland 2, 14-17-14, arr to set 6⅝-in at 2960 ft; Dumas 2, 11-17-14, dk; Dumas 3, 11-17-14, rig. Ohio Oil Co.'s Crain 4, 1-17-14, dk; Pumphrey 2, 1-17-14, dk; Goodwin 2, 2-17-14, sd 3054 ft; Adams 1, 11-17-14, lcn; Lochnager 1, 11-17-14, lcn; Rowland 1, 15-17-14, dk; Smith 1, 1-17-14, dk. Oil Well Corp.'s Dumas 1, 11-17-14, flowing 3240 ft. Ouachita Nat. Gas Co.'s Perdue 1, 33-16-14, lcn. Pure Oil Co.'s Gregory 2, 11-17-14, rig; Gregory 3, 11-17-14, rig; Gregory 4, 10-17-14, dk; Gregory 5, 10-17-14, lcn; J. M. Gregory 1, 11-17-14, dk; Gregory Est. 1, 15-17-14, dk. Rhodes Tr.'s Union Saw Mill 1, 14-19-11, arr to test 2794 ft. Rovenger Oil Corp.'s Perdue A-1, 10-17-14, rig. Dr. Rushing et al's Gregory 1, 11-17-14, set 4½-in at 3192 ft; Gregory 2, 11-17-14, sd 2570 ft. Simon et al's Jerry 1, 21-17-14, set 10-in at 92 ft. Simroll et al's Findley 1, 12-17-14, arr to abn 3179 ft. Simmons et al's Green 1, 3-16-16, rig. Timberlake et al's Dumas 1, 11-17-14, set 12½-in at 150 ft; Carnes 1, 27-13-17, set 10-in at 100 ft.

KANSAS

BARBER COUNTY—T 30, R 14w, Sec 27, Rowland et al's Pickens 1, owd, ne c nw ne, 3210 ft, sd. T 31, R 12w, Sec 17, Merriman et al's Winters 1, c e½, ur 3550 ft. T 33, R 12w, Sec 19, Schaffer et al's Boggs 1, c sw, dr 5330 ft. T 33, R 13w, Sec 2, Schaffer et al's Carter 1, c se se, fsh 3980 ft. T 34, R 13w,

Sec 20, Barton Oil Co.'s Blunk 1, c ne nw, dr 3275 ft.

BARTON COUNTY—T 17, R 11w, Sec 34, McJolton et al's Evanston 1, se c nw, r. o. g. T 20n, R 13w, Sec 12, Everette & Wiley's Ward 1, nw c sw, sd 3940 ft.

BUTLER COUNTY—T 24, R 3e, Sec 22, Fleming et al's Brainard 1, ne c nw, lcn. T 24, R 8e, Sec 5, Mathews et al's Harsh 1, ne c sw, spd. T 25, R 4e, Sec 18, Wichita Drlg. Co.'s Joseph 1, ne c se nw, ts 2730-36 ft, 400 ft oih. T 27, R 3e, Sec 24, La Robb Oil Co.'s Baysinger 1, ne c sw, rig. T 28, R 8e, Sec 21, Burford & Brimm's Ferris 1, se c ne sw, lcn. T 29, R 4e, Sec 21, E. Wilcox et al's Holcomb 1, ne c se nw, sd 1456 ft. T 29, R 8e, Sec 8, Shawver et al's Nelson 1, ne c se, dr 3108 ft.

CHASE COUNTY — T 21, R 7e, Sec 9, Grener, Fowler et al's Carson 1, ne c, fsh 2040 ft.

CHATAUQUA COUNTY—T 32, R 8e, Sec 15, Roth & Faurot's Hanil 1, nw c sw nw, lcn. T 32, R 9e, Sec 33, Manhattan Oil Co.'s Payne 1, se c nw nw, D. & A. 2651 ft.

CLARK COUNTY — T 31, R 23w, Sec 16, Walker & Walner's Mitchell 1, sw c ne, abnd 450 ft. T 32, R 21w, Sec 21, Watchorn O. & G. Co.'s Stephens 3, c e l w½ nw nw, dr 600 ft.

CLOUD COUNTY—T 6, R 4w, Sec 6, Concordia Oil Co.'s Murdock 1, se c, sd 3590 ft.

COFFEY COUNTY—T 22, R 14e, Sec 8, Finney et al's Mitchell 1, se c ne, ¶½ at 1358-75 ft. T 22, R 15e, Sec 11, Clark et al's Douglas 1, nw c se ne, sd 920 ft.

COWLEY COUNTY—T 30, R 3e, Sec 3, Vickers Pet. Co.'s Daniels 1, nw c ne, sd 1650 ft. T 30, R 6e, Sec 20, Allison & Fitzwilliams' Manley 1, ne c nw se, sd 1685 ft. Sec 36, Herron et al's Marshall 1, owd, sw c, ne, sd 1645 ft. T 31, R 5e, Sec 4, Tatlock et al's Elliott 1, owd, nw c se, 3500 ft, abnd. T 32, R 6e, Sec 12, Trees Oil Co.'s Estus 1, se c nw, ts 2473-91 ft, ¶2, comp. Sec 18, Lewis Gas Prod. Co.'s Cook 1, ne c sw, spd. T 33, R 4e, Sec 4, White Oil Co.'s White 1, sw c ne, dr 1860 ft. T 34, R 3e, Sec 10, Shawver et al's Amen 1, nw c, dr 3005 ft.

DICKINSON COUNTY—T 14 n, R 4e, Sec 11, Phillips Pet. Co.'s Gugler 1, se c nw, dr 1850 ft. T 16, R 4e, Sec 2, Skow & Ritchey's Will 1, c nw nw, lcn. Sec 18, Johnson et al's Schlessner 1, c sw ne, dr 560 ft.

ELK COUNTY—T 28, R 13e, Sec 22, Price et al's Thompson 1, c e l se sw, sd 400. T 29, R 12e, Sec 21, La Dow et al's Miller 1, ne c se sw, D. & A. at 1730 ft.

ELLIS COUNTY — T 12, R 17w, Sec 25, R 17w, Sec 25, Derby Oil Co.'s Weigle 1, c nw, dr 1520 ft. T 13, R 19w, Sec 21, Thomas & Moncreif's Boettcher 1, c sw, lcn.

FRANKLIN COUNTY—T 16, R 18e, Sec 17, Smith, Thrice & Fisher's Owens 1, c e l e½ e½, sd 1450 ft. T 17, R 17e, Sec 25, Omar O&G Co.'s Bush 1, se c sw, lcn.

GEARY COUNTY — T 12, R 7e, Sec 10, Pioneer Pet. Co.'s Chase 1, se c, dr 2000 ft.

GREENWOOD COUNTY—T 25, R 12e, Sec 12, Sheedy et al's Gilroy 1, sw c se, rigging. T 26n, R 11e, Sec 28, Paul & Parker's Wiley 1, sw c se nw, spd and sd. T 28, R 12e, Sec 1, Swanson et al's Mayes 1, se c nw ne, sd 1600 ft.

GRAHAM COUNTY—T 8, R 25w, sec 27, Gulf Coast Drlg. Co.'s St. John 1, owd, sw c nw se, dr 3490 ft.

HARPER COUNTY—T 34, R 6w, Sec 24, Amerada Pet. Corp.'s Mendenhall 1, c se se, dr 4960 ft.

JACKSON COUNTY—T 8, R 14e, Sec 3, Smith et al's Wabunce 1, ne c nw, dr 1140 ft.

JEFFERSON COUNTY—T 9, R 19e, Sec 13, Northern Counties' Edwards 1, se c nw nw, sd 2405 ft. T 10, R 17e, Sec 19, Wichita Oil Co.'s Simpson 1, nw c sw sw, rig.

LABETTE COUNTY—T 33, R 17e, Sec 1, Cowell et al's Hornbeck 1, sw c ne sw, sd 1375 ft.

MARSHALL COUNTY—T 4, R 7e, Sec 4, Marshall Oil Synd.'s Finn 1, nw c ne ne, abnd 2606 ft.

McPHERSON COUNTY—T 17, R 1w, Sec 18, Galt-Brown et al's Fross 1, c ne, rig. T 20, R 3w, Sec 20, Polar Oil Co.'s Grey 1, c nw, spd and sd. T 21, R 3w, Sec 9, Herron et al's Voshell 1, ne c, spd and sd.

MARION COUNTY—T 17, R 3e, Sec 13, Rosenthal et al's Talchman 1, nw c sw sw, sp. T 19, R 4e, Sec 17, Frank et al's Reed 1, nw c, td 2841 ft, p. b. 2400 ft, sd. T 21, R 1e, Sec 1, Sun Ray Oil Co.'s et al's Lehrman 1, sw c ne se, abnd 3342 ft.

MEAD COUNTY — T 33, R 28w, Sec 9, Blackwell O&G Co.'s Lilly 1, c se, dr 3475 ft.

MORRIS COUNTY—T 14, R 7e, Sec 32, Klein et al's Barber 1, se c nw, rig. T 16, R 9e, Sec 22, Lambert et al's Southard 1, sw c se, lcn.

NEMAHA COUNTY—T 3, R 11e, Sec 19, Nemeha Oil & Gas Co.'s Myers 1, nwc, sd 3050 ft.

OSBORNE COUNTY—T9, R 15w, Sec 30, Davis et al's Pruter 1, se c sw, dr 2660 ft.

OSAGE COUNTY — T 15, R 15e, Sec 3, Barber et al's Lease 1, c se se, sd 260 ft. T 15, R 16e, Sec 27, West et al's Bailey 1, sw c ne, sd 600 ft. T 17, R 17e, Sec 8, Mull Vit Dev. Co.'s Neil 1, nw c sw ne, sd 2931 ft.

POTTAWATOMIE COUNTY—T 9, R 8e, Sec 7, Shaw et al's Washington 1, se c, lot 17, rig. T 10, R 12e, Sec 11, Crawford et al's St. Mary 1, sw c, sd 2290 ft.

RENO COUNTY—T 22, R 4w, Sec 6, Danciger et al's Willams 1, ne c sw se, rig.

RILEY COUNTY — T 10, R 7e, Sec 20, Welton Oil Co.'s Thierer 1, nw c, dr 2990 ft.

ROOKS COUNTY — T 8, R 16w, Sec 14, Krueger et al's Poor 1, ne c, spd and sd.

RUSH COUNTY—T 17, R 17w, Sec 27, Valerious O&G Co.'s Schreverman 1, c nw, dr 1185 ft.

SEDGEWICK COUNTY—T 26, R 1w, Sec 12, Gypsy, Marland et al's Wright 1, se c ne se, dr 760 ft.

SEWARD COUNTY—T 33, R 33w, Sec 14, Ash et al's Son 1, owd, ne c, dr 3200 ft.

SHERMAN COUNTY—T 7, R 40w, Sec 20, Hanson et al's Murry 1, owd, ne c sw nw, sd 2990 ft.

STAFFORD COUNTY—T 21, R 11w, Sec 23, Harper et al's Siffers 1, owd, nw c sw, nw, sd 4168 ft.

SUMNER COUNTY—T 33, R 3w, Sec 22, Otstot Dev. Co. et al's Bartlow 1, se c, sd 1860 ft. T 34, R 2e, Sec 1, Endfield & Foster's Houston 1, c ne sw, sp. T 34, R 2w, Sec 23, Gypsy Oil Co.'s Douglas 1, ne c se nw, tc 4493-99 ft, 16 bbls per hour, shut in. T 34, R 3w, Sec 4, Jarvis et al's Wernecke 1, se c sw, dr 4207 ft. T 34, R 4w, Sec 11, Jarvis et al's Wycoff 1, sw c nw, 4577 ft, sd. T 35, R 1e, Sec 9, Otstot et al, Volker 1, nw c ne, rig.

TREGO COUNTY—T 13, R 21w, Sec 20, Central Commercial Oil Co.'s Ellis-King 1, nec sw ne, sd 315 ft.

WABUNSEE COUNTY—T 11, R 10e, Sec 24, Doric Oil Co.'s Jones 1, ne c sw, sd 1530 ft. T 13, R 12e, Sec 15, Eskridge Oil Co.'s Henderson 1, nec sw ne, 3700 ft, sd.

WOODSON COUNTY—T 24, R 14e, Sec 32, Spencer & Rainey's Kimball 1, se c ne, sd 1729 ft. T 24, R 16e, Sec 3, Fees et al's Robe ts 1, nw c ne, sd 1418 ft.

OKLAHOMA

GRANT COUNTY—T 28n, R 3w, Sec 6, Otstot Dev. Co.'s Snyder 1, ne c, sd 4518 ft.

HARPER COUNTY—T 27n, R 21w, Sec 24, A. F. Kopisch Oil Co.'s Selman 1, ne c se, spd and sd.

WOODS COUNTY—T 27n, R 15w, Sec 20, Sooner State Oil Co. & E. R. Black's Marcum 1, c sw, spd and sd.

GRANT COUNTY—T 27n, R 5w, Sec 18, J. W. Bailey et al's Custard 1, c se, ts 4835-47 ft, 800,000 gas, to lower 4-in.

KAY COUNTY — T 27n, R 2w, Sec 23, Boucher et al's Cooper 1, se c, water 2580-90 ft, sand 2895-2905, hfw, dr.

GRANT COUNTY—T 26n, R 4w, Sec 34, Sooner State Oil Co.'s Royce 1, sw c nw, sd 550 ft.

KAY COUNTY—T 26n, R 2e, Sec 32, J. A. Vincent & National Union Oil Co.'s McNeal 1, nw c ne, sd 2795 ft.

HARPER COUNTY—T 25n, R 22w, Sec 14, Hoffer Oil Co.'s Cooper 1, nw c se, sd 4182 ft.

GRANT COUNTY—T 25n, R 4w, Sec 22, Cowden's Vallner 2, ne c se ne sw, lost tools at 5640 ft, sd.

KAY COUNTY — T 25n, R 1w, Sec 15, Tonkawa Dev. Co.'s McDaniels 1, se c, bit in ohle, sd.

NOBLE COUNTY—T 24n, R 3e, Sec 11, George Miller et al's Howe 1, c nw se, lcn. T 21n, R 1w, Sec 7, R. L. Corley's Williams 1, se c ne sw, sd 1920 ft. T 20n, R 1w, Sec 32, Marland Oil Co.'s et al's Kidd 1, nw c sw, dr 3695 ft.

CIMARRON COUNTY—T 6n, R 2e, Sec 24, Jake G. Phillips' School Land 1, nw c, hfw in granite wash 4209 ft, sd 4370 ft. T 5n, R 5e, Sec 21, Ramsey Pet. Co.'s State Land 1, sw c ne sw sw, 8-in at 4001 ft, dr out plugs. Sec 27, Ramsey Bros.' State Land 1, c nw ne, 4090-4140 ft, show 35 bbls, hfw 4680 ft, pb to 4040 ft, sd. T 4n, R 1e, Sec 34, Ramsey Pet. Co.'s School Land 1, c se, dr 4270 ft.

BEAVER COUNTY—T 4n, R 25e, Sec 22, O. H. Bonner et al's Maple 1, c se ne, rig.

CIMARRON COUNTY—T 2n, R 9e, Sec 2, Fenton, Brookins & Flowers' Smaltz 1, sw c ne ne, spd and sd.

TEXAS COUNTY—T 2n, R 18e, Sec 23, Connelly, Trammel & Danner's Graves 1, ne c sw sw, sd 315 ft. T 1n, R 15e, Sec 26, Hydraulic Oil Co.'s Hitch 1, ne c, sd 600 ft. T 1n, R 18e, Sec 11, Three Way Oil Co.'s Price 1, se c nw, ts 318-58 ft, hfw, sd 3490 ft. T 1n, R 19e, Sec 5, Trammel, Connelly & Danner's Taney 1, se c nw, sd 280 ft.

WOODWARD COUNTY — T 24n, R 17w, Sec 32, Otstot Dev. Co.'s Simmons 1, se c, sd 1500 ft.

GARFIELD COUNTY—T 24n, R 6w, Sec 9, Pulse & Beamer's White 1, se c nw, sd 4720 ft. T 24n, R 3w, Sec 14, Sagar Oil Co.'s Garsarch 1, se c, fsh 5-in at 4767 ft. T 22n, R 5w, Sec 3, Ashby & Barr's Swinery 1, nw c, sd 740 ft.

ELLIS COUNTY—T 21n, R 25w, Sec 9, Oklahoma Northern Oil Co.'s 1, c se nw, sd 300 ft.

WOODWARD COUNTY — T 21n, R 19w, Sec 15, Burgoyne Bros.' 1, sw c se ne, sd 800 ft. T 21n, R 21w, Sec 25, Sharon's Elmore 1, sw c, sd 2778 ft.

GARFIELD COUNTY—T 21n, R 4w, Sec 12, Beopple et al's Schriver 1, c e l sw sw ne, sd 1850 ft. T 20n, R 4w, Sec 9, Marland's Looman 1, ne c se, sd 5735 ft. Sec 12, Marland's Miller 1, sw cor, sd 4586 ft.

DEWEY COUNTY—T 18n, R 15w, Sec 9, Huckelby & McCoy's Perfect 1, nec, dr 3290 ft.

LOGAN COUNTY — T 18n, R 4w, Sec 6, Davis & Browning's Woods 1, ne c se, lcn. T 18n, R 3w, Sec 33, Haley & Consolidated Drlg. Co.'s Quier 1, se c sw, rep bailer 3875 ft T 17n, R 1e, Sec 20, T. B. Slick's Signs 1, nw c sw, sd 5067 ft. Sec 28, T. B. Slick's Berry 1 sw c se td 5730 ft pb to 4700 ft.

KINGFISHER COUNTY—T 16n, R 7w, Sec 6, Gault-Brown Oil Co.'s Campbell 1, c nw se, dr 3960 ft. T 16n, R 6w, Sec 27, Crawford & McKenna's Sturgeon 1, ne c sw, dr 4432 ft. T 16n, R 5w, Sec 26, Gault-Brown Oil Co.'s Johnson 1, c nw, sd 4512 ft.

LOGAN COUNTY—T 16n, R 1w, Sec 28, Blackford O&G Co.'s Lair 1, c s l n ½ se, sd 1675 ft. T 15n, R 1w, Sec 12, Bu Vi Bar's Kirkpat ick 1, c sw, ur 5-in at 4775 ft.

CANADIAN COUNTY—T 14n, R 6w, Sec 9, A. D. Spear's Piatt 1, se c ne, sd 3223 ft.

OKLAHOMA COUNTY—T 13n, R 3w, Sec 18, Slick & Bailey's Lufkin 1, c ne se, dr 4112 ft. T 12n, R 3w, Sec 15, Cromwell et al's Thompson 1, sw c ne ne, td 6870 ft, 1000 ft tubing in hole.

CANADIAN COUNTY—T 11n, R 7w, Sec 9, Ramsey Bros.' Newman 1, c s l ne, ru strd 4491 ft. T 10n, R 6w, Sec 1, J. M. V. Bailey's Robinson 1, c ne nw, spd and sd.

OSAGE COUNTY—T 26n, R 7e, Sec 30, Prod. & Refs. & C. B. Peters' 1, se c ne, rig and tools. T 23n, R 10e, Sec 7, Sheeders O&G Co.'s 1, c ne, fsh tools 2340 ft.

PAYNE COUNTY — T 19n, R 1e, Sec 33, Gardner Pet. Co. et al's Ham 1, c sw ne, dr 4585 ft, small show of oil. T 18n, R 3e, Sec 32, Garber, Pulse & Gloyd's Widows 1, ne c se nw, sd 1200 ft.

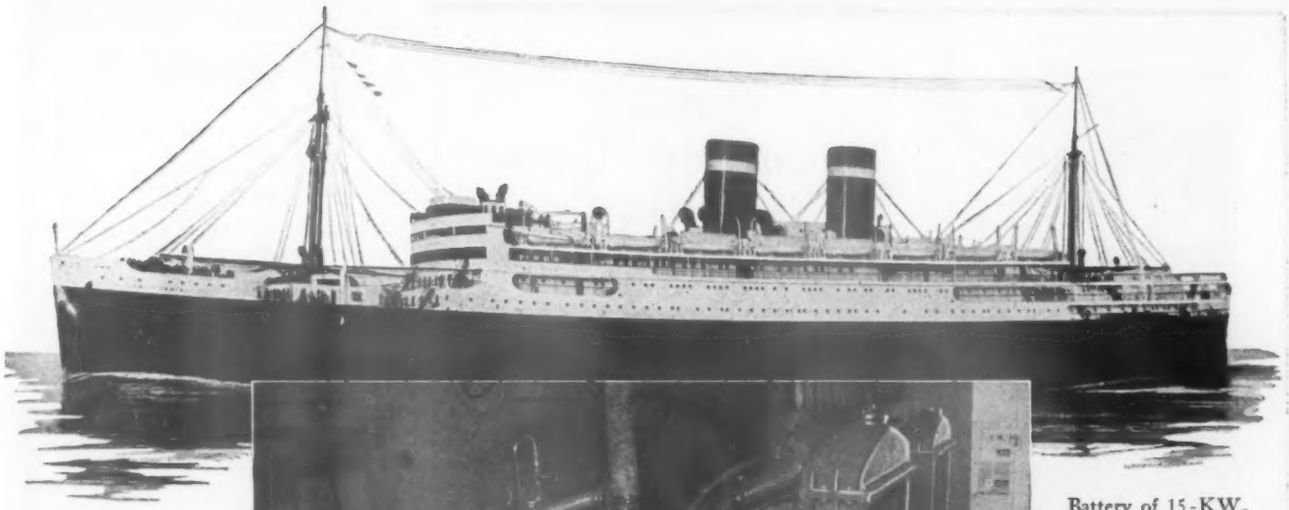
LINCOLN COUNTY—T 17n, R 3e, Sec 20, Willis O&G Co.'s Gun 1, nw c se, ts 4636-77 ft, water and sd. T 17n, R 5e, Sec 27, Flynn & Morgan's Smith 1, se c ne nw, dr 3727 ft. T 13n, R 4e, Sec 16, Bu-Vi-Bar's School Land 1, c ne se, sd 4500 ft.

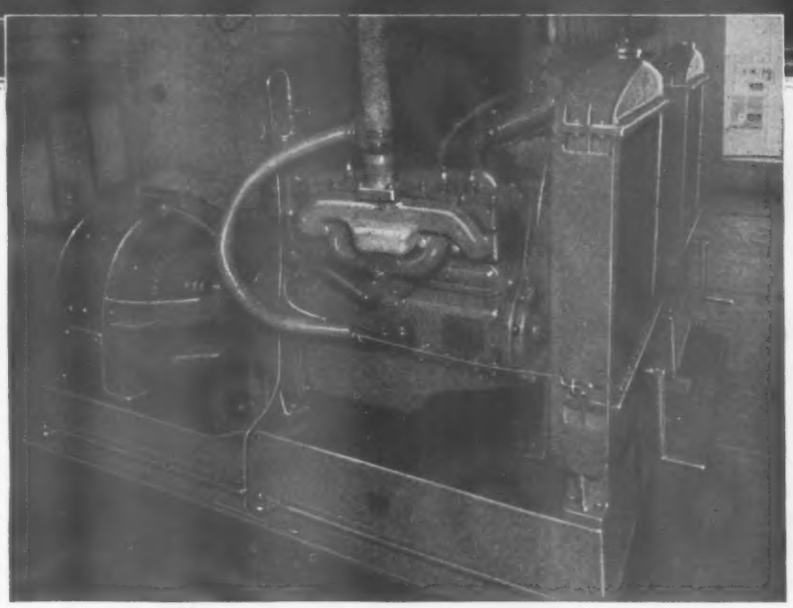
TULSA COUNTY—T 17n, R 13e, Sec 1, E. A. Hawley's Taylor 1, se c ne, spd and sd.

CREEK COUNTY—T 14n, R 9e, Sec 1, L. C. Wheler & King's Morton 1, se c nw, lcn.

OKFUSKEE COUNTY—T 12n, R 10e, Sec 8, Blakely et al's Yarhola 1, sw c se nw, sd 3157 ft. T 11n, R 10e, Sec 4, Moose & Daniels' Stidham 1, sw c nw, sd 622 ft.

MUSKOGEE COUNTY — T 15n, R 18e, Sec 12, York O&G Co.'s Jobe 1, nw c se, show oil at 1100 to 1110 ft, dr 1717 ft. T 13n, R 17e, Sec 34, Elk Drlg. Co.'s McKee 1, c s l,





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se se se, sd 160 ft. T 13n, R 18e, Sec 33, L. T. Haynie's Linder 1, c se, sd 1766 ft.

PITTSBURG COUNTY—T 9n, R 16e, Sec 32, Pattison et al's McDuff 1, sw c nw se, ts at 4472-4525 ft, setg 5-in 4730 ft.

HASKELL COUNTY—T 9n, R 18e, Sec 10, Marion Oil Co.'s Sanders 1, nw c ne sw, sd 2250 ft.

LATIMER COUNTY—T 5n, R 18e, Sec 15, Limestone O&G Co.'s Murray 1, sw c, sd 1700 ft.

CLEVELAND COUNTY—T 10n, R 2w, Sec 22, Cromwell & Franklin's Donavan 1, c sw, sd 4706 ft.

POTTAWATOMIE COUNTY—T 10n, R 3e, Sec 12, Sikes, Kilgore & Shaffer's Ives 1, c se se, cmt cave 5327 ft. T 10n, R 4e, Sec 28, Central National Oil Co.'s Toney 1, sw c, sd 4323 ft.

SEMINOLE COUNTY—T 10n, R 6e, Sec 3, Furhman's Davis 1, sw se, lcn. T 10n, R 7e, Sec 6, Blackwell O&G Co.'s Bean 1, se c ne sw, dr 2790 ft. Sec 18, Shaffer et al's Jones 1, sw c ne, rur.

POTTAWATOMIE COUNTY—T 8n, R 2e, Sec 24, Superior Oil Corp.'s Jones 1, sw nw ne, dr 4374 ft. T 8n, R 4e, Sec 1, Amerada Pet.'s Gravel 1, sw se ne, hfo at 4114-95 ft, Wilcox 4478-85 ft, hfw, sd.

HUGHES COUNTY—T 8n, R 10e, Sec 1, Bauer et al's Penn 1, nw c sw ne, lcn.

CLEVELAND COUNTY—T 7n, R 1w, Sec 15, Sooner State Oil Co.'s Vandeveer, ne nw sw, 8-in at 2994 ft and sd.

POTTAWATOMIE COUNTY—T 7n, R 2e, Sec 17, T. B. Slick's Spangler 1, nw se nw nw, surface pipe set.

SEMINOLE COUNTY—T 7n, R 6e, Sec 7, Simon & Beam's Palmer 1, ne nw ne, rig.

POTTAWATOMIE COUNTY—T 6n, R 2e, Sec 10, Davis, Detrick et al's McGahey 1, se c nw, sd 4988 ft. T 6n, R 5e, Sec 16, T. B. Slick's School Land 1, se c, dr 2980 ft. Sec 20, Roxana Pet. Corp.'s Jackson 1, ne c se ne, lcn.

SEMINOLE COUNTY—T 6n, R 6e, Sec 1, T. B. Slick's Moore 1, sw ne sw, ts 2760 ft, td 61 ft, swab 129 bbl wtr and 15 oil. T 6n, R 7e, Sec 5, Magnolia's Vierson 1, se c nw, dr 4495 ft. T 6n, R 8e, Sec 18, Carter's Phillips 1, nw ne nw, owd, pump 80 bbls per day at 3925-62 ft, comp. T 5n, R 6e, Sec 13, T. B. Slick's Barrett 1, ne c se nw, dr 3975 ft.

HUGHES COUNTY—T 5n, R 9e, Sec 17, E. W. Whitney's Huddleston 1, se c sw, fsh 850 ft. Sec 20, Noble O&G Co.'s et al's Wickett 1, se c, 1850 ft, ur 8-in.

GARVIN COUNTY—T 4n, R 6e, Sec 13, Dixie Oil Co.'s Perkins 1, se c sw, dr 5325 ft. T 4n, R 3e, Sec 10, Garland Oil Co.'s Strickland 1, sw nw sw, dr 2672 ft.

PONTOTOC COUNTY—T 4n, R 6e, Sec 13, American O&R Co.'s Wright 1, nw ne ne, dr 2098 ft. Sec 35, Bowles et al's Rayborn 1, sw c se, D. & A. at 1415 ft.

HUGHES COUNTY—T 4n, R 9e, Sec 14, Clark & Cowden's Burrow 1, c nw ne, dr 2130 ft.

GARVIN COUNTY—T 3n, R 1e, Sec 12, Magnolia's Vaughn 1, nw sw nw, dr 5492 ft.

PONTOTOC COUNTY—T 3n, R 8e, Sec 10, Douglas Oil's Johnson 1, c nw nw, sp.

COAL COUNTY—T 2n, R 8e, Sec 5, Wichtex Oil Co.'s Folsom 1, c nw nw, lcn.

MURRAY COUNTY—T 1n, R 2e, Sec 17, Revel & McGee's Wolfe 1, nw c, sd 435 ft.

COAL COUNTY—T 1n, R 8e, Sec 35, W. E. McGraw e al's Patton 1, sw c se ne, fsh 1600 ft. T 1n, R 9e, Sec 24, Galbreath et al's Jones 1, sw c se, spd and sd.

CADDO COUNTY—T 10n, R 12w, Sec 28, Magnolia's Shelby 1, sw c, dr 2660 ft.

BECKHAM COUNTY—T 9n, R 22w, Sec 32, O&H Pet. Co.'s Barnes 1, owd, sd 3080 ft, with 300 ft oih.

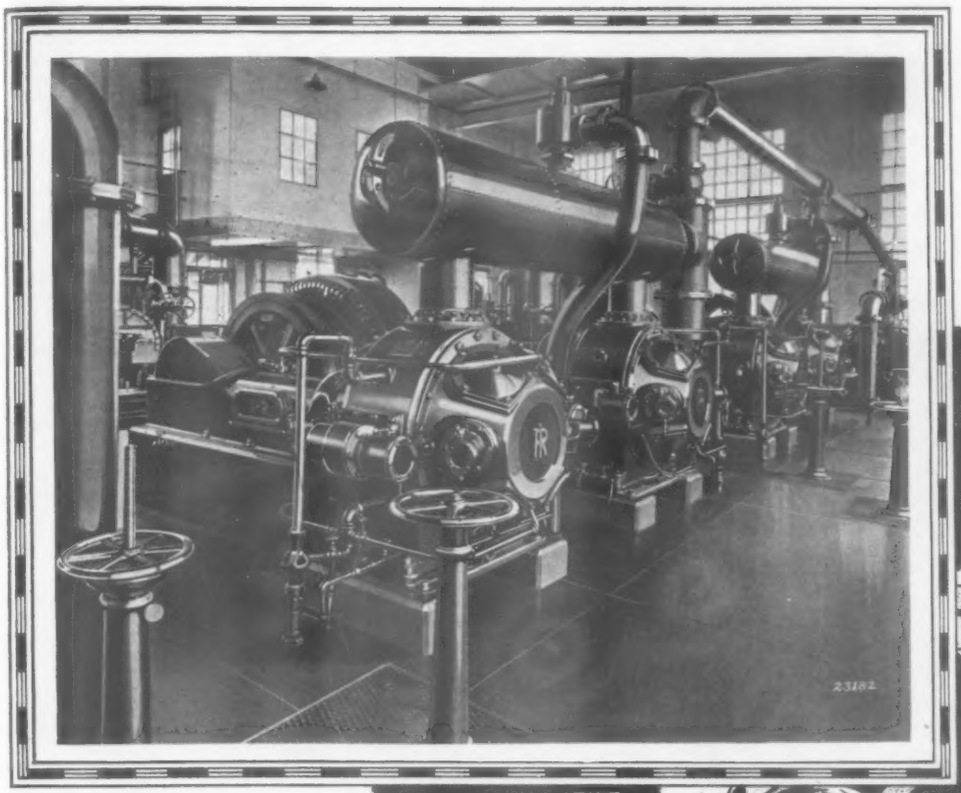
GRADY COUNTY — T 9n, R 5w, Sec 13, Remington's Fulton 1, sw c ne, sd 720 ft.

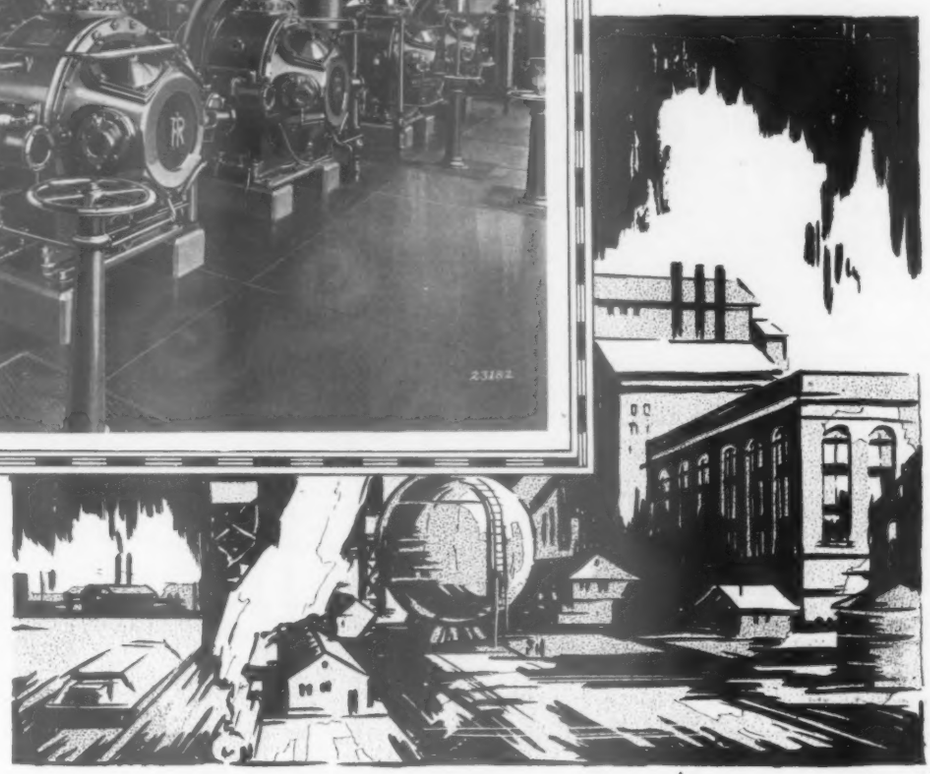
KIOWA COUNTY—T 7n, R 15w, Sec 35, David Malernee's Van Kirkland 1, nw c, dr 620 ft. T 6n, R 15e, Sec 6, Johnson McDowell's 1, c sw ne, dr 500 ft.

CADDO COUNTY—T 6n, R 12w, Sec 29, W. J. Hartley's Gilbreath 1, se c nw se, owd, sd 3394 ft.

KIOWA COUNTY—T 5n, R 14w, Sec 17, Blue Mt. Oil Co.'s Jones 1, se nw nw, sd 530 ft.

GRADY COUNTY—T 4n, R 7w, Sec 21,





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Say you saw it in The OIL WEEKLY

Commercial Drlg. Co.'s Grisman 1, c ne ne, coring 1475 ft.

COMANCHE COUNTY—T 3n, R 10w, Sec 24, Jolly-Ogg's Sparlin 1, se c ne, co 2502 ft.

STEPHENS COUNTY—T 2n, R 5w, Sec 20, Martin & Smythe's Vestal 1, c ne se, lcn.

COMANCHE COUNTY—T 1n, R 12w, Sec 14, Greene et al's Wilson 1, cmtg 5-in at 3315 ft.

JACKSON COUNTY—T 1s, R 20w, Sec 23, Stanley McGregor's 1, sw c nw, lcn.

KIOWA COUNTY—T 2s, R 16w, Sec 6, Landfair's 1, se sw se, dr 2450 ft.

STEPHENS COUNTY—T 3s, R 7w, Sec 7, Pace et al's Absner 1, nw c r. u. r.

JEFFERSON COUNTY—T 5e, R 8w, Sec 28, Amerada's Emerson 1, nw c se sw, dr 1000 ft.

MARSHALL COUNTY—T 4s, R 4e, Sec 35, Wirt Franklin Pet. Corp.'s Foster 1, se c sw sw nw, dr 90 ft. T 5s, R 4e, Sec 11, Bilbo's Chapman 1, ne c nw ne, sd 380 ft.

SOUTHERN CALIFORNIA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
HAWTHORNE—		
Shell, O'Donnell 61	*	5592
POTRERO—		
Associated, Cypress 2	1000	4620

CLAREMONT—Claremont O. & G. Co.'s 1, sd 1130 ft.

CALABASAS—Easton and Smith's 1, 19-1-17, dr shale 975 ft.

COSTA MESA—Mesa Pet. Co.'s 1, 16-6-10, dr hard sand 2983 ft.

CYPRESS—Ohio's 1, 9-4-11, dr sandy shale 5166 ft.

DAVIDSON CITY — Calif. Well Drilling Co.'s Del Amo 1, testing at 7555 ft.

DOMINGUEZ — Dominguez Extension Oil Co.'s 1, 22-3-13, swedging casing 5510 ft.

EL SEGUNDO — Southern Calif. Drilling Co.'s Matteson 1, sd 4865 ft.

FULLERTON—Shell's Stern 1, 22-3-10, dr hard sand 4890 ft.

HAWTHORNE—Shell's O'Donnell 61, abn 5592 ft.

HUNTINGTON BEACH — Calnan Pet. Corp.'s S. and W. 1, sd 5107 ft.

INGLEWOOD—Hurst Oil Corp.'s 1, 28-23-14, sd 3740 ft.

LANCASTER—John B. Harding's 1, 28-7-11, rcmt 6¼-in cas 825 ft, td 975 ft.

LYNWOOD—Security Pet. Corp.'s 1, 13-3-13, dr shale 4673 ft.

MONTEREY PARK—Monterey Park Pet. Co.'s 1, 26-1-12, sr to set 8¼-in cas 4810 ft.

NEWHALL—W. W. Stabler's Castaic 1, sd 3410 ft.

POTRERO—Associated's Cypress 1, pumping 5 bbls oil and 15 bbls water 5406 ft; Cypress 2, comp as 1000-bbl high gravity well at 4620 ft.

PUENTE HILLS—Anchor Pet. Co.'s Hudson 1, co 2250 ft.

SAN FERNANDO—Shell's Mission 2, 4-2-15, 18-in cas cmt 735 ft.

SAN JOSE HILLS—D. and B. Oil Co.'s Amar 1, plugged to 2600 ft.

SEAL BEACH—George F. Getty's 1, 14-5-12, dr hard shale 5520 ft.

SAN JUAN CAPISTRANO—O. K. Carr's Forster 2, sd 4185 ft.

TELEGRAPH CANYON—Quadra Pet. Co.'s 1, sd 4210 ft.

WATTS—Southwest Pet. Corp.'s Ramsaur 1, sd 4300 ft.

WATSON—White-Behr Oil Co.'s 1, 2-4-13, dr hard gray sand 5070 ft.

WESTMINSTER—McCollom and Taylor's 1, 13-5-11, dr 600 ft.

YORBA—Standard Oil Co.'s 1, 27-3-9, dr hard gray sand 5340 ft.

MISCELLANEOUS

RIVERSIDE COUNTY—Hemet Pet. Co.'s 1, dr hard sand 2680 ft. Spindletop Oil Synd.'s 1, dr sand 3260 ft. Trabuco Oil Co.'s 1, dr hard sand 3434 ft.

SAN BERNARDINO COUNTY — Colton Terrace Oil Co.'s 1, sd 1705 ft. Western Pacific Oil Co.'s 3, co 3025 ft.

SAN DIEGO COUNTY—Davenport O. & G. Co.'s 1, dr gray sand 420 ft. Ganymede & Dunn's 1, fsh and co 3210 ft. S. S. Turner's Baler 1, dr hard gray sand 581 ft.

NORTHERN CALIFORNIA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
EDISON—		
Superior Oil Co., Bloemer 1, 24-29-29	*	3210

KERN COUNTY

BAKERSFIELD—Jackson and Chamberlain's 1, 19-29-28, dr 430 ft. Pacific Eastern Prod. Co.'s KCL 1, 6-30-28, sd 5640 ft; KCL 2, 6-30-28, making prod. test 4290 ft, td 4500 ft.

BELRIDGE—Zurich Oil Co.'s 1, 18-28-22, co 2790 ft. H. H. Bell's 1, 4-30-22, lcn.

BUTTONWILLOW—Milham Explo. Co.'s S-1, 7-29-24, dr 4155 ft; No. 5, sw ¼ 5-28-23, new lcn. Macadams Trustee's 1, 26-29-23, testing gas 5950 ft. Southern Calif. Gas Co.'s 1, 4-28-23, testing 2830 ft; No. 1, 10-18-23, lcn.

COMANCHE POINT — W. W. Stabler's Tejon 1, 23-32-29, dr hard shale 2242 ft.

DELANO—North American Consolidated Oil Co.'s 1, 5-25-25, dr 5304 ft.

DEVILS DEN—No active operations in this district.

EDISON — Superior Oil Co.'s 1, 24-29-29, abn 3210 ft.

FRUITVALE—Pacific Eastern Prod. Co.'s 2, 21-29-27, dr shale 3163 ft; No. 2, 21-29-27, dr shale 2220 ft.

GREENFIELD—J. E. O'Donnell's Houghton 1, 31-30-28, dr shale 3475 ft.

GOULD HILLS—Cymric Oil Co.'s 1, 36-28-20, will deepen from 2480 ft. Exeter Oil Co.'s 1, 1-29-20, pumping some oil, td 835 ft. Myrtle E. Oil Co.'s 1, 8-29-21, will deepen from 930 ft. Henry Robinett's 1, 2-229-20 dr brown shale 291 ft.

McFARLAND—General Petroleum Corp.'s 1, 35-25-25, new lcn.

McKITTRICK—Abbott Pet. Co.'s 1, 2-30-21, sd 1940 ft.

SHALE HILLS—All tests in this ditrict sd.

TEHACHAPI-MOJAVE — Crusaders Oil Co.'s 1, 21-10-10, fsh 2370 ft.

SANTA BARBARA COUNTY

GOLETA — Barnsdall's Edwards 2, 1-4-30, prod oil and gas 2455 ft.

SANTA BARBARA—Channel Oil and Development Co.'s 1, 29-4-27, swabbing salt water 6025 ft. Pet. Explo. Co.'s 1, 20-4-27, dr 3608 ft.

SUMMERLAND — Summerland Oil Co.'s Becjer 1, 22-4-26, trying for water shutoff, td 3045 ft.

VENTURA COUNTY

BARDSDALE—Calif. Western Oil Co.'s Elkins 1, 5-3-19, dr shale 2222 ft.

CAMARILLO—American Oil Co.'s 1, 33-2-20, rig.

OXNARD—Shell's Grub 1, 22-2-22, dr 667 ft; Snodgrass 1, 23-2-22, dr 1360 ft.

PIRU—Petroleum Securities Co.'s Diablo 1, 26-5-18, oil sand 4565 ft.

RINCON—Scott Petroleum Co.'s 1, 35-4-25, will deepen from 3895 ft.

RED MOUNTAIN—Miley Explo. Co.'s Casitas 1, 7-3-23, co 750 ft.

SANTA PAULA—San Pedro and Pt. Fermin Synd.'s 1, 13-4-21, dr shale 466 ft.

SATICOY—Standard Oil Co.'s 1, 11-2-22, dr shale 1676 ft.

SIMI—Shell's Berylwood 1, 32-3-20, dr hard sand 7180 ft; Strathern 1, 6-2-18, sd 4735 ft.

SOUTH MOUNTAIN—Ring Pet. Corp.'s 1, oil and gas showings 4110 ft.

VENTURA — Star Pet. Canet 1A, 13-3-23, 8⅝-in cas cmt 5947 ft.

MISCELLANEOUS

ALAMEDA COUNTY—Jergins Trust's 1, 14-3-3, co 1535 ft, td 1610 ft. Thomas and Hammill's 1, 16-3-3, perforating 4¾-in cas 1025 ft.

CONTRA COSTA COUNTY—W. Edwards 1, 13-2-2, testing oil sand 2135-2225 ft.

COLOUSA COUNTY — Calivada-Superior Oil Co.'s 2, 31-15-4, dr shale 341 ft. Colus Oil Co.'s 1, 31-15-4, chancing to 114-ft steel derrick, td 260 ft. Amalgamated Oil Co.'s 1, 27-14-5, fsh 2845 ft. Continental's 1A, 27-18-4, fsh for dr pipe 4300 ft. Numa Oil Co.'s 1, 19-1-5, dr 271 ft. Prize Oil and Gas Co.'s 1, 19-4-1, 10-in cas cmt 800 ft, td 900 ft.

HUMBOLDT COUNTY—Eureka Oil Co.'s 1, 21-4-1, changing to rotary 3070 ft. First National Oil Co.'s 1, 36-2-1, dr 170 ft. Humboldt Oil Co.'s 1, 6-2-1, sr 2800 ft, td 2880 ft. Northern Counties Oil Co.'s 2, 36-2-1, dr sand 2070 ft.

KINGS COUNTY—Milham Explo. Co.'s Elliott 1, 2-22-17, stdr dr pipe 6935 ft, td 7235 ft. All other wells in district are sd.

MENLOCINO COUNTY — Whitted et al's 1, 28-19-13, oil showings 400 ft; 2, 29-19-13, gas showings 500 ft.

MERCER COUNTY—Delhi Leasing Co.'s 1, 19-16-11, dr 1110 ft. H. L. Kuhn's 1, 9-12-9, dr shale 1288 ft.

MONTEREY COUNTY—Marland's 1, 32-34-11, sdtr dr pipe 2770 ft.

NAPA COUNTY—Griffiths Oil Co.'s 1, 6-8-3, setting packer at 2500 ft, td 2675 ft.

SAN LUIS OBISPO COUNTY — Arroyo Grande Oil Co.'s 1, 21-32-13, swedging 6¼-in cas 3470 ft, td 4385 ft. Indian Dome Oil Co.'s 1, 25-31-17, will deepen from 2680 ft. Barneyberg Oil Co.'s 2, 25-32-14, will deepen from 2420 ft. North Star Oil Co.'s 1, 32-31-15, deepening from 3250 ft. Panorama Oil Co.'s 1, 7-31-21, sr 1340 ft, td 2050 ft. Paso Robles Oil Co.'s 1, 19-26-12, redr 1700 ft. Richfield's C-1, dr shale 3565 ft. San Luis Synd.'s 1, 29-31-13, dr hard sand 2675 ft. Texas Pacific Oil Co.'s 1, 25-32-14, deepening from 2420 ft. Union's Russ 1, 34-32-15, dr hard sand 1795 ft.

SAN MATEO COUNTY—Sequoia Oil Co.'s 1, 13-7-5, swabbing salt water 1400 ft. Shell's Butts 1, 21-6-5, trying to locate water 2585 ft.

MOUNTAIN STATES

MONTANA

BIG HORN—Selig Oil Co., 1, se 21-6s-35, sd 865 ft.

CARBON—Ohio Oil Co., Northern Pacific 1, 11-7s-21e, dr 4275 ft. Atlantic Oil Co., 3, 20-7s-24e, no report.

CASCADE—Lone Star, McLean 1, 12-21n-3w, sd 100 ft.

CHOTEAU—Geraldine O. & G. Co., sw ne 1-21-11e, rigged.

CUSTER—Montana Belle, 28-8-45, resuming.

FERGUS—Melton Corp., Fenholt 1, 24-21-17, mvg in, td 2290 ft. Mineral Research Co., 1-13-17, 23, sup. 930 ft. DeMont Oil Co., 29-16-29, dr 500 ft.

GARFIELD—Carroll Bros., nw ne 6-14n-31e, stndg cmtd 1440 ft.

HILL—A. H. McFarland, sw 15-30-13e, sd 100 ft. Jones Oil Co., Mangell 2, 32-34-14e, dr 325 ft.

LIBERTY—Bear's Den Oil Co., Laird 1, 31-37n-6e, dr 3180 ft. Sunburst O. & R. Co., Disotell 1, 10-37-5e, testing.

MADISON—Madison County Oil Co., ne 17-7s-1w, sd 1700 ft.

MUSSELSHELL — Manhattan Oil Co., ne 24-7-24e, sd 60 ft. McElwain Oil Dev. Assn. 2-11-22, rig.

RICHLAND—Community Drlg. Co., Pioneer 1, se 35-27-51n, testing oil and gas showing at 3081 ft.

PONDERA — Claggett Dev. Co., 8-27-4w, stndg 25 ft. J. W. Elliott et al, nw¼ 17-24-4w, dr 800 ft. Texas Pacific Coal & Oil, Hirshberg 1, sw 14-27-4w, rig. Continental Dev. Co., Gjullin 1, nw 15-27-4w, rig.

PHILLIPS—Big Dome Oil Co., Bloomberg 1, ne 1-32-32e, sd 980 ft. Dillman & Stephenson, sw 8-31n-34e, dr 700 ft.

SWEETGRASS—Shoshone Consolidated, ne 23-2n-15w, dr 2475 ft.

STILLWATER—Empire State O. & G. Co., 1, se 32-4s-16e, will abn at 3661 ft.

TETON—Craig-Speer-McCutcheon, 9-23-2w, fsh 1400 ft. Continental Dev. Co., Ritmoure 1, 8-27-5w, dr 2375 ft. Hardrock Oil Co., 1, 5-25-1e, shot at 1507 ft. Crockner et al, se 2-24-1w, sd 600 ft. Fulton Pet. Corp., Tibbets 1, ne 8-25-1e, dr 300 ft. Elkhorn O. & G. Co., 1, ne 12-24-1e, dr 150 ft.

TOOLE—Sunburst O. & R. Co., Grandview 1, 10-34n-32, rig. Madeline Oil Co., Swenson 1, 33-35-4w, dr 1460 ft. Western Natural Gas Co., Pitchard 1, 3-37-2e, dr 2200 ft.

WIBAUX—Johns & Hagan, sw 15-11n-57e, resumed at 700 ft.

UTAH

DUCHESNE—Midwest Explo. Co. & Utah Southern Oil Co., Earley 1, 13-4-6, dr 3887 ft.

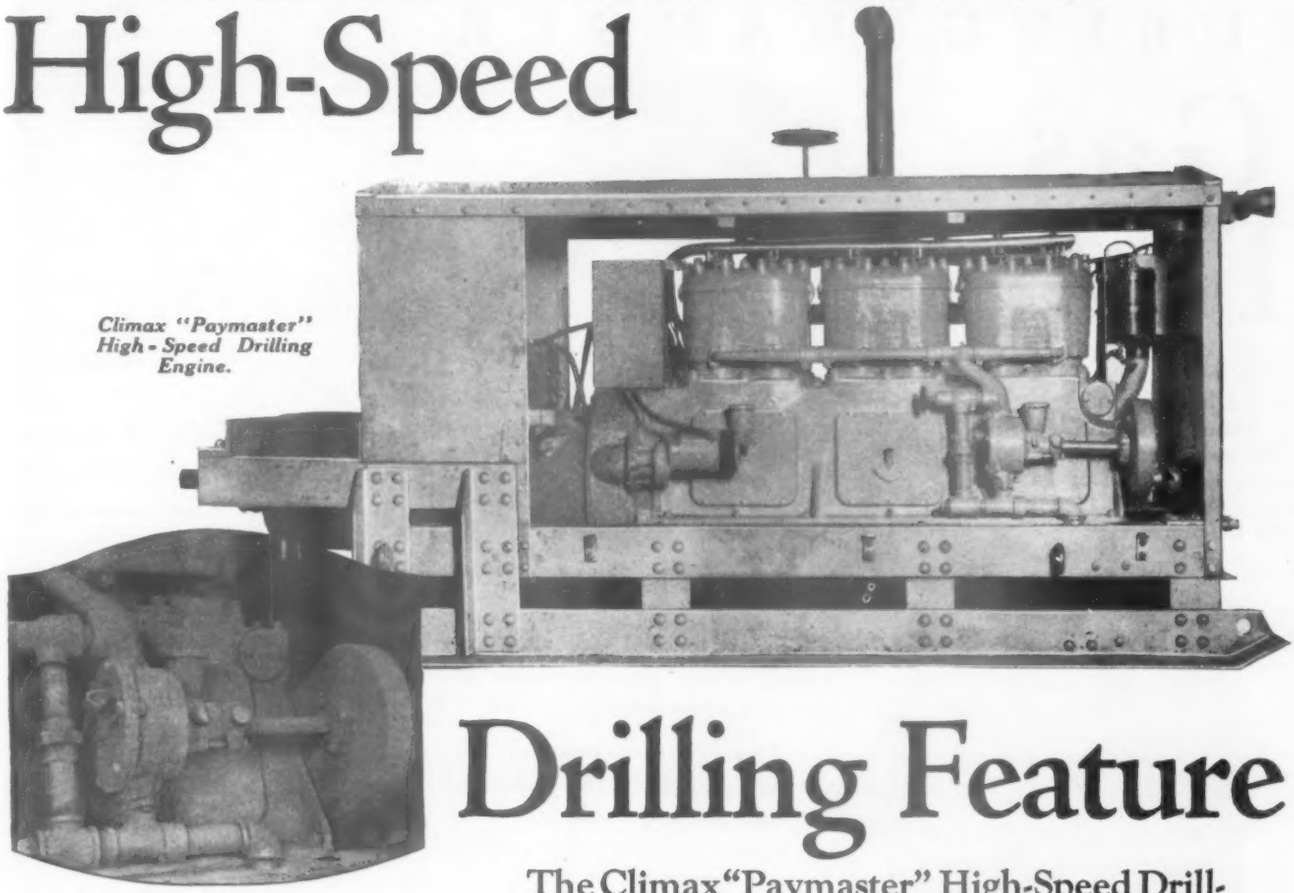
CARBON—Price River Pet. Co., 1, se 16-14s-10e, dr 2685 ft.

GRAND—Utah Oil Refining, Moab Consolidated, Utah Southern Salt Valley 1, 13-23-21, bldg rig and camp. Utah Southern & Moab Consolidated, Shafer 1, 36-26-20, dr 920 ft. Navajo Pet. Co., 2-20-21, mvg in rig.

NAVAJO RESERVATION—Continental Oil Co., Boundary Butte 1, 31-43-21, fsh 2625 ft.

SAN JUAN—Union Oil Co. of California,

Another New Climax High-Speed Drilling Feature



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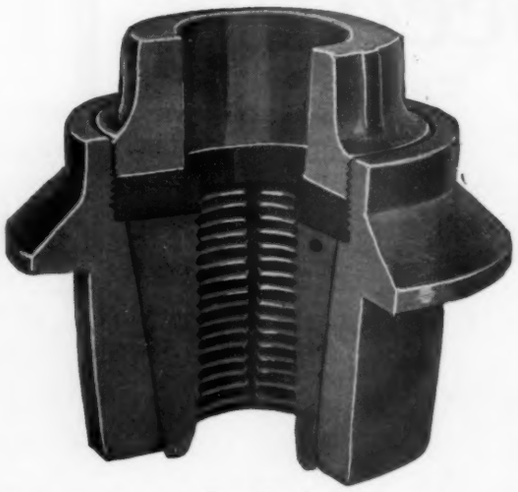

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40 miles se of Moab, sptg lcn. Boulder Knoll O&G Co., 1, 17-34-25, ur to set 6¼-in at 2225 ft.

UINTAH—Western Venture Oil Co., Krumvider 1, 6-5-21, set cas 753 ft. Maude Ellen Oil Co., 28-3-21, dr 856 ft.

UTAH—Diamond Oil Co., No. 3, ne 28-8s-4e, dr 1350 ft, oil showing.

WAYNE—Texas Prod. Co., Shipley 1, 5-27-14, fsh 2975 ft. Phillips Pet. Corp., 16-27-16, sp standard tools.

WASHINGTON—Ora L. Hiatt et al, ne 30-43-14w, dr 350 ft. Mid-American Oil Co., nw 17-43s-15w, dr 1350 ft. Uzona Oil Co., se 17-43s-15w, susp 390 ft. Uzona Oil Co., 1A, sec 19-43s-15w, spd and sd, 43 ft. C. E. Cline et al 2, 27-41s-12w, will resume at 275 ft. C. E. Cline et al, 3, 23-41s-21s, will resume at 542 ft. showing at 1557 ft. Zion Oil & Refining Corp., Virgin Pet. Corp., 2, ne 23-41s-12w, testing 3, sw 13-41s-12w, will resume at 756 ft.

COLORADO

ARCHULETA—Kansas-Colorado Oil Co., 17-34-2w, sd 1300 ft.

BACA—Marland Oil Co., Table Mesa 1, 8-30s-50w, rigged.

EL PASO—Grand Union Oil Co., John Jr. 2, 19-17s-67w, sd 775 ft.

ELBERT—Botts, Likkick et al, se 1-8s-59, trouble with cave at 900 ft.

JACKSON—North Park Oil Co., Goettler 1, 9-6n-82w, co 506 ft.

JEFFERSON—Woods et al, 1, 30-3s-69, dr 1125 ft.

LAS ANIMAS — Reiter-Foster & Phillips Pet. 23-29n-56, dr 1810 ft.

LA PLATA—Detroit Oil Assn, Olbert 1, 9-35-12w, sd 1610 ft.

LOGAN—Northeastern Colo. Oil Co., State 1, 36-8n-55w, line trouble at 5592 ft.

MESA—Eureka Oil Co., Holly 2, 24-1s-1e, dr 925 ft.

MOFFAT—Ohio Oil Co., Kuykendall 1, 22-21n-11w, sd for the winter. Reiter-Foster Oil Co., State 1, 16-12-100, sd 2240 ft. Yarg Producing & Refining Co., 205, 26-4n-92w, dr 3737 ft. Alliance Oil Co., Milliken 1, 14-4n-92w, dr 2745 ft.

MONTROSE—Indian Pet. Corp., Gilmore 1, 4-45-16w, sd 4210 ft.

RIO BLANCA—Texas Prod. Co., Freeman 1, 27-3-94, dr 5578 ft. Argo Oil Co., sw 9-2s-96w, stndg ready to spud.

ROUTT—Great Western Oil Co., State 1, 17-60n-56w, dr 2455 ft.

WELD—Platte Valley Pet. Corp., Patterson 1, 24-6n-61w, stndg 3811 ft.

YUMA—Etmyre Snyd., se sw 7-2s-43, spd 20 ft.

NEW MEXICO

CHAVES — Buffalo-Roswell 1, 24-11-27, sd 4290 ft. McQuigg Bros., Neis 1, 7-5s-29e, stndg 1525 ft. Berendo O. & G. Co., Roswell 1, 5-10-27, sd 725 ft. Manhattan Oil Co., Arena 1, 18-13-31e, dr 3545 ft. Snowden & McSweeney, Merchant 1, nw 27-15s-23e, rig up.

CURRY—Hasson Pet. Co., Laird 1, 22-8s-36, spdand sd. Clovis O. & G. Co., Hoskinson 1, 21-3n-36, abn, td 4010 ft.

DEBACA—Matador Oil Co., State 1, sw 6-4n-20e, spd 200 ft.

GUADALUPE—Hanchett Oil Co., Rutherford 1, 24-8-24, fsh 4301 ft.

LEA—Midwest Ref. Co., State 1, 9-19s-39e, dr 3050 ft. Marland Oil Co., Eaves 1, 19-26-37, co 2843 ft. Marland Oil Co., Seideman 1, 4-25s-36e, dr 1435 ft. Marland Oil Co., Robert 1, 20-23s-35e, dr 1555 ft. Marland Oil Co., Sholes 1, 19-25s-37e, sp. Empire Gas & Fuel Co., State 1, 8-21s-35e, sp 100 ft. Gypsy Oil Co., State 1, 34-21s-36e, sp 220 ft.

McKINLEY—Smart & Reid, 7-17-9, rig. Inland Oil Corp., 22-18-10, installing heavier rig. S. Dysart 1, 21-14-9, sd 1650 ft. Williams et al, 30-18-8w, sd 1795 ft. Reliance Oil Co., Valentine 1, 16-17-9, dr 1500 ft.

QUAY—Gibson Oil Corp., 1, 25-8-32, prep to deepen.

SAN JUAN—Continental Oil Co., Munoz 17, dr 4955 ft. Kansas-Colorado Oil Co., Atterberry 1, 23-31-11, sd 1850 ft. T. C. N. Oil Co., Lanier 1, 9-29-11, sd 547 ft. Huntington Park Oil Co., 29-30-9, sdtr bailer, td 4585 ft, wtg for smaller tools. Fidelity Oil Co., Abrams 2, 23-29-11, stndg 667 ft. Huerfano Oil Co., Wiltbank 1, 25-29-11, stndg 800 ft. San Juan Pet. Co., 1, 9-29-13w, dr 2950 ft. Poole & Peebles, Lawson 1, 9-30n-11w, repairing, td 700 ft. Co-Ne-Mo 1, 28-29-11, td 29 ft. Kirtland Drlg. Co., Hunt 1, 10-29-15, rig sk, spd new hole 75 ft. Kutz Canon O&G Co., Day 1, 29-28-10w,

Smackover, Seminole and Tonkawa have contributed far more to the petroleum industry than oil. They have shown the close relationship between drilling methods, cementing methods and production. These fields were Halliburton-cemented.

HALLIBURTON
OIL WELL CEMENTING COMPANY
DUNCAN, OKLAHOMA

dr 270 ft. Fidelity Oil Co., James 1, nw 23-29-11w, spd at 195 ft.

SAN MIGUEL—E. Adams et al, Deason 1, 14-15n-16e, co 1155 ft.

SOCORRO—Abo Oil Co., 1A, 14-3s-6e, set 12¾-in at 600 ft and sd.

TORRANCE—Duran Dome Oil Co., 1, 31-2-14, sd 1600 ft. F. G. Wilson, Tr., Pace 1, 12-6n-7, stndg 2215 ft. Bluhall O&G Co., 20-6n-10e, sd 854 ft, wtg cas. San Juan Coal & Oil Co., Randall 2, 26-6n-10e, dr 5313 ft.

WYOMING

ALBANY—Union of Calif. dr 900 ft.

BIG HORN—Agate Oil Co., ne 13-51-92, no report. Utah-Southern 3, 29-56n-97w, dr 2960 ft. Wisconsin-Himes, 9-54-94w, td 673 ft. Producers & Refiners 3, 24-56n-98w, 12½-in at 1707 ft.

CARBON—Portland Dome Synd., 28-26n-86w, sd 3600 ft. Graybeal Snyd., 16-28-91, sd 4380 ft. Simpson Ridge Pet. Co., se 34-22n-80w, sd for repairs at 430 ft. Lake Valley Oil Co., se 14-20-88, resuming at 4915 ft. Pacific-American Oil Co., sw¼ sw¼ 32-25-89, spd.

CONVERSE—Wind River O&G Co., ne 8-32-72, dr 500 ft, gas showing. Criterion Oil Co., Irvine 1, 5-31-70, co 3597 ft. John Ackard, McKinley 1, 21-31-69, sd 3000 ft.

FREMONT—Producers & Refiners, Muskrat 1, 34-34-92, fsh 3442 ft. Texas Production Co., Alkali Butte 1, 1-34-95, dr 4000 ft. Zola Oil Co., Crook's Gap 1, 25-27-93, sd 3750 ft. Iowa-Wyoming Inv. Co., 30-1s-2e, bottomed at 1500 ft. Martin F. Falk, ne 9-31n-98w, dr below 2310 ft. R. A. Brett et al, se 29-32n-93w, resuming at 1300 ft.

JOHNSON — Fairway Oil Co., Crazy Woman 1, 7-47-82, resuming at 2250 ft. Tarrant Synd., 17-46n-82w, sd 3625 ft.

LINCOLN—Fontenelle Oil Co., 1, ne ne 1-24n-113w, water trouble at 1075 ft. Quad States Enterprise, Inc., 11-19n-116w, lcn. Midwest Explo. Co., Waterfall 1, sw 35-22-115, mvg in.

NATRONA—Combs Dev. Co., nw 12-39-78, sd 2016 ft. Combs Dev. Co., ne 12-39n-78w, repairing crank shaft at 660 ft. Bessemer Oil Co., 8-33n-82w, resuming.

NIOBRARA—Penn-West Pet. Co., 13-35n-62w, bottomed at 800 ft. Hollingsworth Bros., 17-39-79, fsh. Buck Creek Oil Co., 4-36n-62w, dr 200 ft.

PARK—Fred G. Ostland, Hoodoo Ranch 1, 23-51-101, sd 1740 ft. Honolulu Oil Co., Four Bear 1, 29-48-103, comp 3270 ft, testing. E. H. Rosenburg, ne 25-58n-98w, cmtd 1265 ft. Honolulu Oil Corp. & Prod. & Refiners Corp., Pitchfork 1, 14-48n-102, mvg in. Ohio Oil Co., 27-53-101, dr 3685 ft. Lenco Pet. Co., 1, 20-52-102, sd 150 ft. Julius Peter et al, 17-57-101, lcn.

PLATTE—Walter Adams, Trustee, 13-25-66, no report.

SUBLETTE — Wyo. Prod. Co., se 30-28n-113w, ur 6-in. California Co., 11-29n-115w, skid rig for new hole. Good showing in old hole.

SWEETWATER—Prairie O&G Co., Tucker 1, 18-13-93, ur 15½-in at 690 ft. P & R-Marland of Colorado, 26-20-104, sd 485 ft. Tower Pet. Co., 1, 6-14n-103w, crooked hole at 1322 ft. Custer Pet. Co., 24-12-100, so gas and dr 1906 ft.

UINTA—Uinta O. & Dev. Co., 21-51n-120w, casing trouble at 2300 ft. Evanston O. & G. Co., 17-15-120, resuming, td 2200 ft. California Co., 1-7-17n-116w, water so at 235 ft. Wilcox & Henley, se 3-14n-118, testing at 756 ft. Olsen Bros., se 6-15-118, sd 2275 ft. J. R. Kelley et al, 12-14-18, lcn. Minton et al, 8-18-116, dr 450 ft. Minton et al, 18-18-117, will resume at 800 ft on old Spencer well. P. L. Cooper et al, 10-16-118, resuming. Marlmsbury et al, DeLoney 1, 26-14-118, mvg in. Brigman et al, 12-15-118, dr 1400 ft. Whitman et al, 18-16-117, dr. Mosey Kastor et al, Secs. 7 and 19-16-117, rigs mvg in. Charles DeLoney, 5-16-117, lcn.

WASHAKIE—Unnamed persons, ne 15-44-64, sd 600 ft.

WESTON—Gose Synd., ne 29-47n-65w, will resume with rotary cutter. Allen Oil Co., Howard 1, 15-44-64, sd 600 ft and dr water well nearby.

TEXAS GULF COAST

Completion

HARRIS COUNTY—
Dr. P. S. Griffith, Fee 1, 8 mi nw Houston . . . . . * 700

AUSTIN COUNTY — Humble's Wilson 1, Raccoon Bend, dr 3993 ft, shale; Grawunder A-1, Raccoon Bend, dr 3300 ft, sandy shale. L. H. Weadock's Ward 1, dr 1720 ft, shale. Alexander & Lyles' Goebel 1, sd 3550 ft.

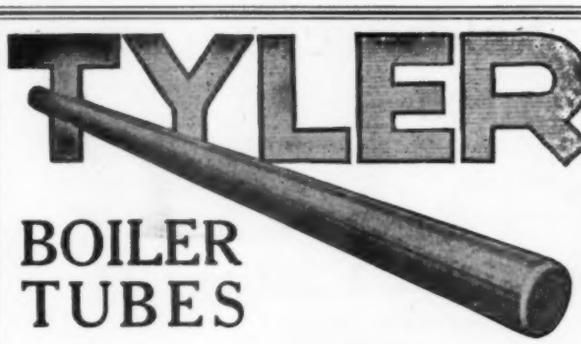
BRAZORIA COUNTY—Roxana's Allen Bernard 1, Allen Dome, pumping 15 bbls a day; Allen 4, Allen Dome, running 4¾-in cas, td 5120 ft; Randon 1, Allen Dome, prep to dr deeper from 4942 ft. Gulf's Perry 3, Stratton Ridge, fsh for drill stem 5825 ft. Bowman et al's Seaburn 1, Stratton Ridge, dr 3422 ft, shale. Stanfield & Myers' McNeil 1, Hinckle Ferry, sd 1420 ft. Rucks et al's Muldoon 1, Slop Bowl, standing at 1025 ft. Brazo Oil Co's Wisdom 3, Damond Mound, dr 1485 ft, shale and lime. McNellie Oil Co.'s Bartlett 1, West Columbia, lcn.

CHAMBERS COUNTY—Pure Oil Co.'s Lost River 1, Lost Lake Dome, bailing at 3670 ft; oil show; Old River 1, Lost Lake Dome, ru; Trinity River 1, Lost Lake Dome, ru; Little Lost Lake 1, Lost Lake Dome, ru; Lost River Lake 1, dk; Cut-Off Bayou 1, Lost Lake Dome, dk. R. L. Bartlett's Fisher 1, Barbers Hill, pumped 25 bbls, but then stopped.

COLORADO COUNTY—Rich Oil Corp.'s Von Rosenburg 1, 2½ mi ne Columbus, dr 2290 ft, gbo and lime. Deal et al's Tanner 2, 3 mi s Glidden, dr 935 ft, gbo and shale.

FORT BEND COUNTY—Sun Oil Co.'s E. C. Farmer 1, Boling, dr 1870 ft, cap rock; E. C. Farmer 2, Boling, lcn; Kaspereck 3, Boling, dr 1955 ft, sand; H. R. Farmer 6, Boling, dk. Gulf's Trone 7, Long Point, dr 2925 ft, shale; J. M. Moore 15, Moore's Field, dr 4050 ft. Humble's Brazos Farm 1, Dewalt dome, dr 1035 ft, hard sand and boulders. Vacuum Oil Co.'s Levy 1, Thompson, lcn.

HARRIS COUNTY — Dr. P. S. Griffith's Fee 1, 8 mi nw Houston, abnd at 700 ft. Juanita Oil Co.'s Kitsman 1, 3 mi n Cypress, sd 1950 ft. Hunt et al's Lobit 1, 4 mi n



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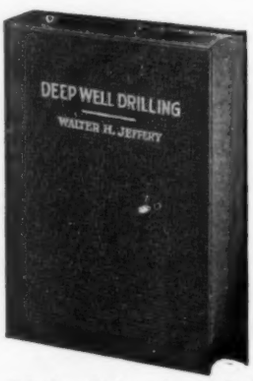
Deep Well Drilling

Second Revised Edition

By Walter H. Jeffery



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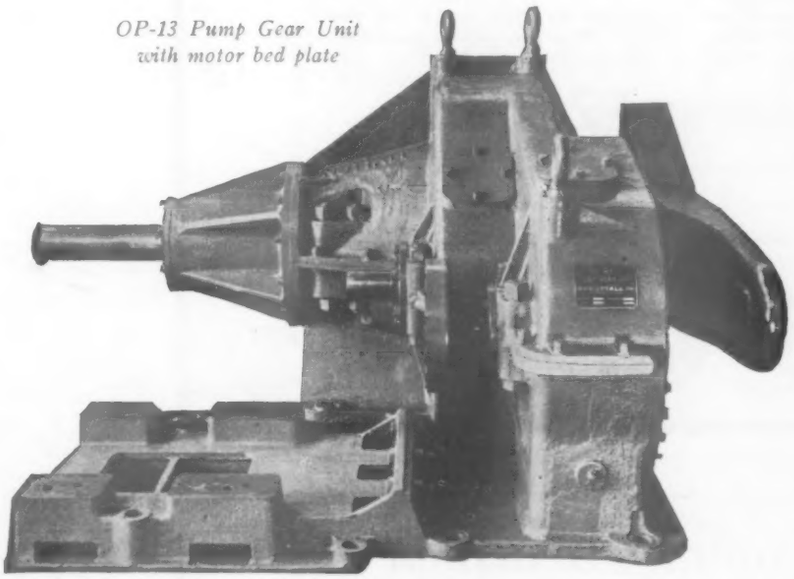
WRITE FOR OUR BULLETIN NO. 62 IT GIVES MANY OTHER REASONS AS WELL AS OTHER VALUABLE DATA

OP-13 Pump Gear Unit with motor bed plate



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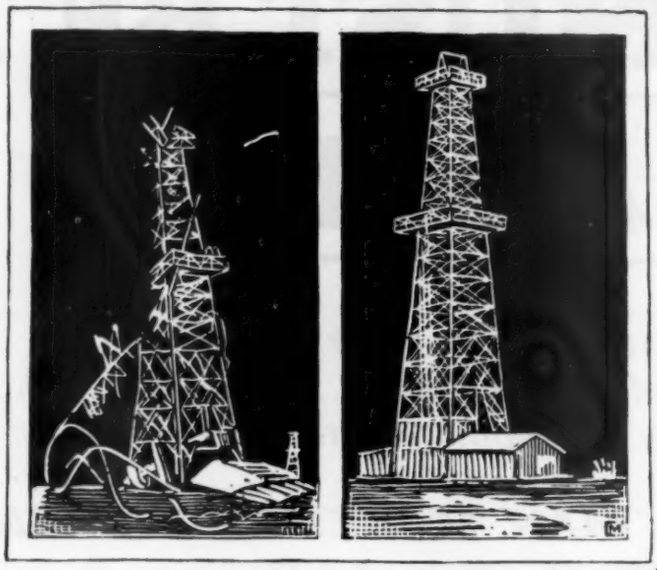

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Goose Creek, dr 1845 ft, gbo. Humble-Marland's Warren 4, Hockley, ru.

JEFFERSON COUNTY — Deep Test Oil Co.'s McFaddin 1, 4 mi ne Spindle Top, sd 2175 ft. Gulf's Bordages '5, Fannett, dr 1850 ft. Southern Spindle Top O. & Dev. Co.'s Young 1, 1 mi w Nederland, sd 3425 ft. Port Arthur O. & Dev. Co.'s West 4, Westbury, sd 3965 ft, gbo. A. M. Deems et al's Mashman 1, 1 mi s Voth, td 275 ft. Traders Oil Co.'s Cissell 1, Spindle Top, dr 4500 ft, sand and shale. The Texas Co.'s Gladys City 1, Spindle Top, dr 4430 ft, sand. Beaumont Oil Co.'s Tyrrell 1, 2 mi w Brooks, dk.

LIBERTY COUNTY—Barlow et al's Minchcliff 1, 2½ mi ne Cleveland, sd 2215 ft. The Texas Co.'s Staiti 9, S. Liberty, dr 3155 ft, gbo; Staiti 10, S. Liberty, dr 1952 ft, gbo; Pickett 1, nw extension S. Liberty, sdtrk 3044 ft; Green 4, nw extension S. Liberty, ru. Sun Oil Co.'s Richardson 1, nw extension S. Liberty, ru. Sun Oil Co.'s Richardson 1, nw extension S. Liberty, dr 1275 ft, shale; Cunningham 1, nw extension S. Liberty, dk; Singleton 1, nw extension S. Liberty, dr 1730 ft, gbo. Electric Oil Co.'s Wood 1, nw extension S. Liberty, dr 1290 ft, cap rock. Big Dome Interests' Finley 1, 2¼ mi nw Hardin, dr 1520 ft, gbo.

MATAGORDA COUNTY—Matagorda County Dev. Co.'s Hawkins 1, Bay City, sd 1985 ft. Gulf's Sanborn 6, Hawkinsville, coring 620 ft; Vinyard 1, Hawkinsville, dr 2660 ft, gbo.

EAST TEXAS

HARRISON COUNTY—
Nat. Gas Prod. Co., Adams 4, E. Bracken sur ..... * 2336

ANDERSON COUNTY — Brooks et al's Henby 1, Joseph Mertz sur, dk. Humble's Jones Jr. 1, David Roberts sur, dr 3670 ft.

CAMP COUNTY—J. C. Roger's Boyd 1, R. M. Montgomery sur, sd 723 ft.

CASS COUNTY—Hickman et al's Mott 1, A. Douthit sur, dr 2646 ft.

CHEROKEE COUNTY — Panhandle Oil Co.'s Whalen 1, J. Jordan sur, sd 1300 ft. Joe Walter et al's Barnes & DeLoach 1, Perry Reese sur, sd 1112 ft.

FREESTONE COUNTY — Roxana Pet. Corp.'s Marshall 1, D. E. Marshall sur, abn 777 ft.

HENDERSON COUNTY—W. K. Cayton et al's Hoffer & Nash 1, H. Jefferson sur, sd 2910 ft.

HARRISON COUNTY — Baca Oil Co.'s Roseborough 1, E. Carroll sur, arr to deepen 1440 ft. Jim Clark's Furrh 4, J. Short sur, set 6-in at 987 ft. Magnolia's Vincent 2, R. W. Bedford sur, coring 2367 ft. Mitchell et al's Jones 1, J. Lipscomb sur, set 6-in at 946 ft.

MARION COUNTY—Lumbermans Oil Co.'s Bonham 1, R. Potter sur, sd 1200 ft.

NACOGDOCHES COUNTY—P. R. Harris et al's Griffin 1, J. W. Anderson sur, sd 1301 ft. Stein & Lewis' Birdwell 1, Jose A. Chirino sur, cleaned out to 1500 ft. Union Sulphur Co.'s Whitermark 1, Jose A. Chirinio sur, dr 2860 ft.

PANOLA COUNTY—J. H. Dickson's Cummings 1, J. Johnson sur, rig. R. E. Davidson's Johns 1, W. H. Woodley sur, rig. H. Hines Baker 1, G. Goodwin sur, sd 2967 ft. Lieuallen & Hasenfuss' Hall 1, E. F. Mitcheson sur, set 10-in at 60 ft. Magnolia's Adams 1, J. M. Birdsong sur, tested sw at 1932 ft; Richardson 1, B. Lovall sur, dr 1766 ft; Leigh Trosper 1, B. Stephens sur, coring 2601 ft; Vance 1, J. Womack sur, set 13⅜-in at 152 ft. Natural Gas Prod. Co.'s Adams 4, E. Bracken sur, tested sw at 2336 ft. D. Thomason's Crenshaw 5, B. C. Jordan sur, set 8-in at 963 ft. The Texas Co.'s Adams A-4, J. Womack sur, set 10-in at 40 ft; Brumble 3, E. Bracken sur, set 10-in at 40 ft.

RUSK COUNTY — C. M. Joiner et al's Bradford 1, J. Ximines sur, dr 423 ft. Magnolia's Durren 1, Agulla Norris sur, dk. McCurrie et al's Sparks 1, Jesse Coarse sur, arr to deepen 2148 ft. D. Osborne et al's Matthews 1, D. Cortinas sur, sd 2330 ft.

SHELBY COUNTY—Magnolia's Pickering 1, Wm. J. Crane sur, dr 2020 ft.

SMITH COUNTY—Gulf Ref. Co.'s McCarmond 1, Vincent Moore sur, sd 2949 ft. Humble's Pruett 1, Nichols Henderson sur, sd 2019 ft; Birdsong 1, Nancy Childs sur, dr 537 ft.

UPSHUR COUNTY — S. W. Richardson's Newsome 1, J. R. Davis sur, sd 2025 ft; Minor 1, A. Lowery sur, fsh 3500 ft.

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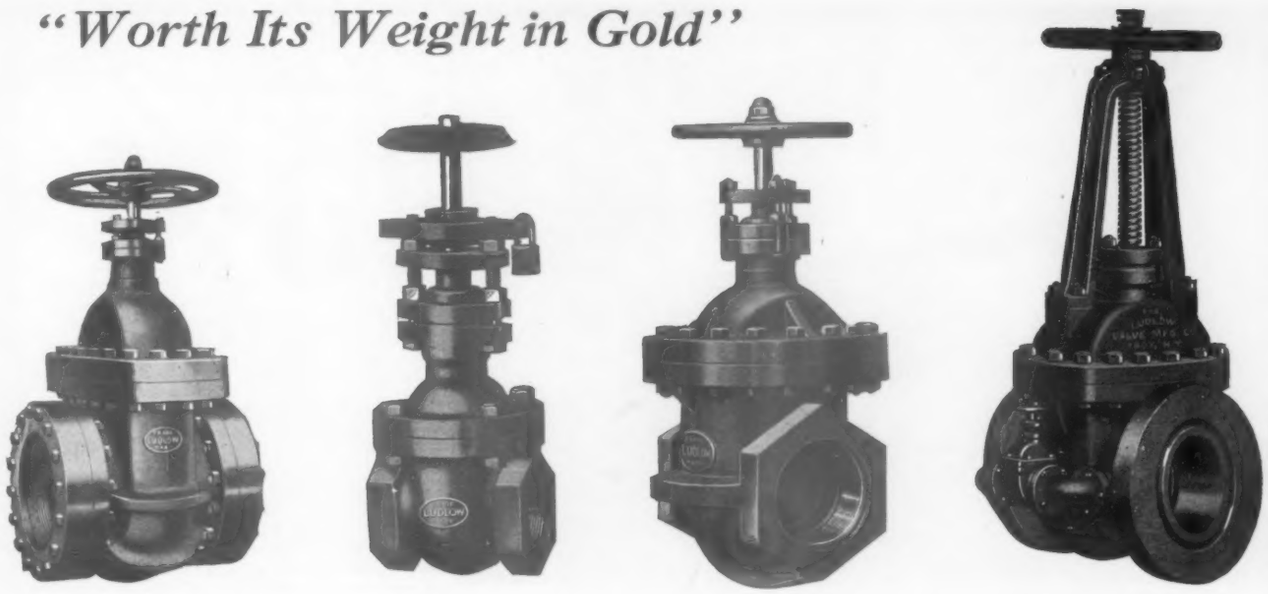

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CROCKETT COUNTY—		
M. B. Wyrick et al, Halff 1	*	1400
TOM GREEN COUNTY—		
Marland Oil Co., Johnson 1-A	*	3420
JONES COUNTY—		
R. F. Garland & Co., Glynn 1	*	3145
REAGAN COUNTY—		
Hagan-Emch & Marland Oil Co., Loftin 1	*	3067
Marland Oil Co., University 1	*	3205
UPTON COUNTY—		
Cowboy Evans et al, University 1..	*	2305
VAL VERDE COUNTY—		
Magnolia Pet. Co., Whitehead 1 ...	*	6725

ANDREWS COUNTY—Deep Rock Oil Co.'s Harris 1, elev 3173 ft, top salt 1705 ft, dr 2865 ft.

BORDEN COUNTY—Dixon Creek Oil Co.'s Clayton-Jackson 1, elev 2606 ft, top salt 1250 ft, top lime 2940 ft, dr 3075 ft. Marland Oil Co.'s McDavid 1, elev 2310 ft, top salt 870 ft, top lime 2410 ft, fsh hfw 3410 ft.

BREWSTER COUNTY—Cole-Cowden et al's Jackson-Harmon 1-A, spd and sd. Forrest Oil Co.'s Skinner 1, spd and sd. J. M. Hickey et al's Jackson-Harmon 1, sd 1035 ft. Van McPhail et al's McIntyre 1, sd 1725 ft. Reese & White's Kimball 1, dr 1795 ft. Wilcox & Anderson's Gage 1, elev 4320 ft, dr 2075 ft.

CONCHO COUNTY — Douglas Oil Co.'s Harral 1, rig.

CRANE COUNTY — C. C. Duffey et al's Cowden 1, lcn. Gulf Prod. Co.'s Waddell 4, rig.

CROCKETT COUNTY—Geo. H. Anderson & P. H. Williams' University 1, top salt 990 ft, dr 1490 ft. The California Co.'s Powell 1, dk. R. B. Coyle et al's Halff 1, sd, hfw 1382 ft. Dixie Oil Co.'s Thompson 1, dr 295 ft. W. W. Donnelly et al's Massie 1-A, sd 135 ft; Todd 1, fsh 600 ft. Gulf Prod. Co.'s Powell 3-D, rig; Thompson 1-A, rig. Grayburg Oil Co.'s Halff 8, sp. Henshaw & McMan O&G Co.'s Owens 1, elev 2769 ft, top salt 1140 ft, top lime 2055 ft, dr 3175 ft. Renee Oil Co.'s University 1, lcn. Republic Prod. Co.'s Powell 1-B, dk. W. R. Simmons & Marland Oil Co.'s University 1, dr 1115 ft. Taylor-Link Oil Co.'s Powell 2, dk. Tidal Oil Co.'s University 1, dk. Transcontinental Oil Co.'s Atwood 1, rig. Whonlick et al's Halff 1, dr 675 ft. World Oil Co.'s Schneeman 1-B, elev 2663 ft, dr 2915 ft F. P. Zoch et al's University 1, sp.

CULBERSON COUNTY — Deep Rock Oil Co.'s Dettis 1, lcn. Dittman Drlg. Co.'s Miller 1, sd 1767 ft. J. M. Hickey et al's Finley 1, sd 1055 ft.

JEFF DAVIS COUNTY — Humble O&R Co.'s C. Flores 1-A, elev 4239 ft, show gas with hfw 4755-65 ft, dr 4775 ft. Sam F Means & G. M. Ball's J. Z. Means 1, fsh 2767 ft.

ECTOR COUNTY—The Texas Co. & J. S. Cosden's Connell 6, dr 825 ft.

EL PASO COUNTY—Ellsworth et al's McKinney-Jones 1, lcn abn. Sillix et al's Malone 1, spd and sd.

FISHER COUNTY—Cranfill & Reynolds & Sun Oil Co.'s T. Willingham 1, rig. R. W. Rainey et al's Marberry 2, elev 1929 ft, top lime 2995 ft, sd 3160 ft. Sinclair O&G Co.'s Steele 1, dr 2470 ft.

GARZA COUNTY—Emerald Oil Co.'s J. M. Boren 3, elev 2363 ft, dr hfw 3555 ft. J. R. Latimer & A. F. Waggoner's W. L. Cross 1, lcn. Marland Oil Co.'s Pippen 1, dr 1785 ft.

GLASSCOCK COUNTY—Marland & Texon's Settles 1, plugged back from 3504 to 1319 ft and co with 1000 ft oih. Meriwether Oil Co.'s McDowell 2, elev 2522 ft, top salt 1000 ft, air pocket 1210 ft. Roxana's R. L. Boston 1, rig. World Oil Co.'s McDowell 1-B, rig.

TOM GREEN COUNTY—Cox et al's Llano Fee 1, sd 845 ft. Fitzgerald et al's Bennett 1, sd 1955 ft. P. H. McLaughlin and W. R. Ridge's Holder 1, spd and sd.

HOWARD COUNTY—Bristow & Merrick's Hooks 5, rig; Roberts 1, elev 2757 ft, dr 1935 ft. W. W. Donnelly et al's Clay 1, dk; Martin 1, co 3222 ft. F-H-E Oil Co.'s Roberts 4-A, elev 2727 ft, dr 1685 ft; Roberts 1-C, elev 2720 ft, sd 1960 ft; Roberts 1-D, elev 2748 ft, top lime 2096 ft, re-set cas on pay 2950-52 ft;

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Our attention has been called to apparent attempts recently made by certain manufacturers to infringe upon Bettis Casing Protectors. Our U. S. Patent No. 1,573,031 and foreign patents fully protects us as well as our hundreds of good customers. So when you order rubber casing protectors be sure to *specify* Bettis and avoid substitution.

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Roberts 3-D, dr 2110 ft; Roberts 2-E, dr 965 ft. Godley O&G Co.'s Hooks 3, dr 215 ft. Greene O&R Co.'s Clay 1, sd 985 ft. Henshaw Oil Corp. et al's Settles 1, sd hfo 2519 ft. Magnolia Pet. Co.'s Harry Hyman 1, elev 2360 ft, dr 2985 ft; Roberts 3, elev 2715 ft, top lime 2060 ft, cmt cas 2975 ft, dr 2990 ft; Roberts 4, elev 2704 ft, fsh 1035 ft; Roberts 5, sd hfo 2550 ft; Roberts 7, elev 2769 ft, dr 910 ft; Roberts 8, rig; Roberts-Magnolia 1, co after second shot, td 1874 ft. Marland & Texon's Settles 2-A, sd 845 ft; Settles 3-A, ur 845 ft. Mays-Nixon et al's Flowers 1, elev 2497 ft, sd 2517 ft. Owen-Sloan Oil Co.'s Roberts 4, elev 2744 ft, sd 1990 ft. Pure Oil Co.'s Chalk 4, spd and sd. Sun Oil Co.'s Settles 2, dr 780 ft. Sweeney & Henry's Chalk 6, spd and sd. Tate-Weekly & Tubbs' Roberts 4, co after shot, td 1894 ft. Bert Weekly et al's Roberts 1, plugged back from 3505 to 1870 ft.

HUDSPETH COUNTY — American Land Co.'s Lockhart-Roseborough 1, sd 180 ft. Western States Oil Co.'s Gardner-Moseley 1, dr 1780 ft; S. W. Moore 1, sd 1707 ft.

IRION COUNTY — B. A. Cline et al's Thompson 1, lcn. P. E. Hill et al's Horney 1, elev 2268 ft, sd 1600 ft. Kimbrough & Tuel's Nutt 1, dr 310 ft. L. P. Powell et al's Horney 1, sd 320 ft. F. E. Webb et al's Nutt 1, elev 2354 ft, co 825 ft. West et al's Suggs 1, rig.

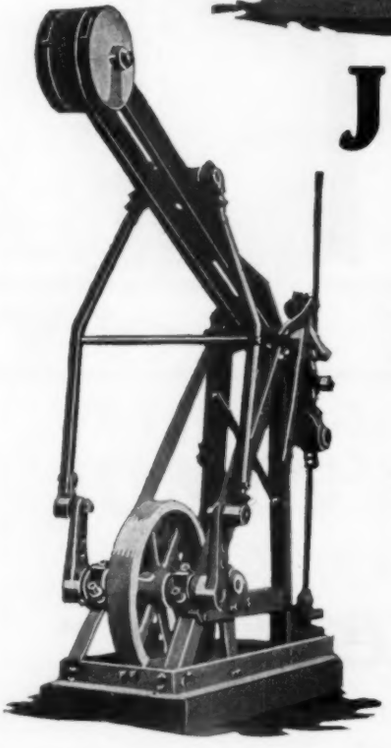
JONES COUNTY—Hucony Gas Co. et al's Tiner 1, dr 935 ft. Phillips Pet. Co.'s Winters 6, dr 2890 ft. Roeser-Pendleton & Stebbins O&G Co.'s Higgs 2, machine. Teas & Wheeler's H. Sayles 1, dr 1060 ft.

KENT COUNTY — J. S. Cosden & Co.'s Bilby 1, lcn.

KING COUNTY—Humble O&R Co.'s Pitchfork 1, fsh 4035 ft.

LOVING COUNTY — Delaware Oil Co.'s Lockhart-Ramsey 1, top salt 780 ft, cmt cas 4145 ft. Lockhart & Co.'s Fee 1, dr by tools 2260 ft; Lepp 2, elev 2651 ft, dr 2770 ft. Hadlock Oil Co.'s (was Ramsey Oil Co.) G. B. Russell 2, co 810 ft.

LYNN COUNTY—Elpo Oil Co.'s Nevels 1, dr 2145 ft.



JENSEN

Straight Lift Pumping Unit

LIKE Jensen Jacks, this dependable Jensen Pumping Unit has an absolutely straight lift. It may be operated with either an electric motor or gas engine. Stroke approximately 28 inches. Has cut down expenses for many producers.

Catalog of Jensen Pumping Equipment free on request.

JENSEN
BROS. MFG. CO.
COFFEYVILLE, KANS.

Export Office: 136 Liberty St., New York City

MARTIN COUNTY — Phillips Pet. Co.'s Slaughter 1, sd 215 ft.

MENARD COUNTY — Carpenter & Robbins' Kothman 2, dr 400 ft. Moody Corp.'s Allison 1, elev 2146 ft, sd 1500 ft. Panhandle Ref. Co.'s Eckardt 1, rig. Renfro et al's Davis 1, dr 385 ft. Sabiens & Bevins' Wilhelm 1, sp. Sorrells & Jackson's Wilhelm 1, sp.

MIDLAND COUNTY—Gholson et al's Moreland 1, sd 3510 ft. O. H. Shoup et al's Parks 1, elev 2871 ft, ur 1200 ft.

MITCHELL COUNTY — Owen-Sloan Oil Co.'s G. M. Brown 1, machine.

PECOS COUNTY—Geo. H. Anderson et al's University 1, elev 2801 ft, top salt 1030 ft, top lime 1770 ft, dr 1780 ft. Alexander & Lyles' Sellman 1, lcn. Bateman & Price's Pecos River Bed 1, machine. Benedum & Trees' Corden 1, sd 495 ft. Buell & Hagan's Pryor 1, elev 2930 ft, top salt 1445 ft, sd 2508 ft. Diamond Pet. Co.'s Blackstone-Slaughter 1, machine. M. Z. Dibble et al's Bonebrake 1, elev 2555 ft, sd 1170 ft. Ditto Oil Co.'s Montgomery 1, spd and sd. Bob Elmore et al's M. Holmes 1, dr 1070 ft. Everett et al's Fields 1, sd 1015 ft. Furman Oil Co.'s McNear 1, materials. McDonald & Stanley's Parsell 1, spd and sd. Mid-Kansas O&G Co.'s Pryor 1, elev 2790 ft, top salt 1465 ft, dr 2180 ft. Olean Pet. Co.'s Sherbino 1, elev 3027 ft, dr 910 ft. Phillips Pet. Co.'s Heyman-Nutt 1, elev 2934 ft, sr 450 ft. Roxana & Kirby Pet. Co.'s University 1, dr 865 ft. Southern Crude Oil Purch. Co.'s Scharbauer 1, elev 2680 ft, dr 660 ft. B. J. Spikes et al's Brown 1, elev 2387 ft, sd 655 ft. Transcontinental Oil Co.'s University 1, elev 2543 ft, dr 1825 ft. Vacuum Oil Co.'s Elsinore 1, elev 3554 ft, ur 2616 ft. World Oil Co.'s M. Cerf 1, elev 3435 ft, dr 3205 ft; Kloh 1, elev 2810 ft, dr 1160 ft.

REAGAN COUNTY—The California Co.'s University 4, elev 2895 ft, top salt 1340 ft, ur 3048 ft. Mark Curtis & Moody Corp.'s Walters 1, spd and sd. Roxana Pet. Corp.'s University 1, fsh 400 ft. Skelly Oil Co.'s University 2, elev 2918 ft, top salt 1340 ft, set cas 2679 ft. Texon O&L Co.'s University 1-B, Group 1, dr with 2000 ft oih 8200 ft.

REEVES COUNTY — Exploration Co.'s Kinney 1, sd 2170 ft. D. R. Thompson et al's Eddins 1, elev 2719 ft, top salt 1622 ft, sd 5499 ft. Grisham-Hunter & Cosden & Co.'s Conner-Rathje 1, elev 2667 ft, top salt 1037 ft, dr 3230 ft.

RUNNELS COUNTY — Agnew & Shields' Russell 1, dr 360 ft. Gibson & Johnson's Serratt 1, sr 2640 ft; Rainwater 1, rig. Jones Oil Synd.'s Hale 1, sd 2215 ft. Kennedy et al's Talley 1, sd 2340 ft. McLean et al's Clayton 1, sd 1050 ft. Henry B. May et al's Schneider 1, elev 1666 ft, fsh 1775 ft. Marland Oil Co.'s Russell 1, elev 1845 ft. Marland & E. L. Smith Oil Co.'s Herring 1-A, dr 655 ft. Miles Oil Co.'s Lawhon 1, sd 2480 ft. Royal Pet. Co.'s Willingham 1, sd 1720 ft. R. B. Summers et al's Reese 1 co 800 ft. Swensondale Oil Co.'s Werner 1, elev 1803 ft, sd 3008 ft. Vacuum Oil Co.'s Flannagan 1, sp; Fowler 1, elev 1706 ft, fsh 1570 ft. Watchorn O&G Co.'s King 1, elev 1660 ft, dr 3465 ft.

SCHLEICHER COUNTY — Long Bros. et al's Williams 1, rig.

SCURRY COUNTY — J. B. Mims et al's Koonsman 1, rig.

STERLING COUNTY—Manhattan Oil Co. & Hucony Gas Co.'s Elwood 1, rig.

STONEWALL COUNTY — Henshaw Oil Corp. et al's W. P. Moore 1, dr 1105 ft.

TERRELL COUNTY—Champlin Ref. Co.'s Carter 1, elev 2884 ft, fsh 2490 ft. Deep Rock Oil Co.'s Noelke 1, elev 2405 ft, top lime 1130 ft, dr 2450 ft. Humble O&R Co.'s University 1, elev 2284 ft, dr 2925 ft. Keck-Pecos Trust Co.'s Hamilton 1, dk. Milham Corp.'s Bassett 1, elev 2270 ft, co 2409 ft. Miller Bros. et al's Allison-Murke 1, rig. Wooley-Jones et al's Parkenham 1, rig.

UPTON COUNTY—Atlantic Prod. Co. et al's Elkins 1, elev 2741 ft, top salt 1590 ft, dr 1630 ft.

WARD COUNTY — E. H. Devore et al's Black 1, spd and sd. Estex Oil Co.'s Estes 1, set cas 628 ft. Denver Prod. & Ref. Co.'s

Built to Last!

DONOVAN BOILERS

JUST recently in Oklahoma a green fireman left the blow-off open on a boiler under pressure and kept up the fire until nearly all of the water had been blown out. Then he turned cold water on the hot crown sheet, and believe it or not, that crown sheet didn't leak a drop. The tubes were slightly sprung, but the boiler was soon at work again.

Probably the man doesn't know to this day that he is alive because the boiler thus abused was a Donovan, but the men who own the pump station are duly grateful that it's still there.

It is a very common thing to hear an Oil Man refer to a Donovan Boiler as Old Faithful. These Boilers have a way of going on and on, making a lot of dry steam from a little fuel and with hardly ever any repairs or replacements.

FRICK-REID SUPPLY COMPANY

TULSA, OKLA.
West of the Mississippi, Stores Everywhere

PITTSBURGH, PA.
East of the Mississippi, The Frick & Lindsay Co.

Axelson Machine Co.
Sucker Rods, Pull Rods, Plunger Working Barrels (Pumps) etc.

Beaumont Iron Works Company
Dreadnaught Rotary Equipment Water-Cooled Drawworks, Pumping Hoists, Traveling Blocks, etc.

Donovan Boiler Works
Oil Country Boilers and Tanks.

Frick-Reid Service Belting
Rubber Covered and Friction Surface.

National Transit Pump and Machine Co.
Power and Steam Pumps.

J. P. Ratigan
Grips, Clamps, Beam Hangers.

Joseph Reid Gas Engine Company
Gas and Oil Engines, two and four-cycle, Band Wheel and Direct Drive Pumping Powers.

Whitlock Cordage Co.
Manila Cordage, including Frick-Reid Manila Bull Ropes—same quality for ten years.

Lapweld and Seamless Tubular Goods

Walworth Company
Valves, Fittings and Tools for Steam, Water, Gas, Oil and Air.

Rossendale-Reddaway Company
"Camel Hair" Beltings, Belt Clamps.

Engineering Crews
for the installation of Pumping Powers and related equipment.

Everything *for the oil well*

We Carry Stocks of

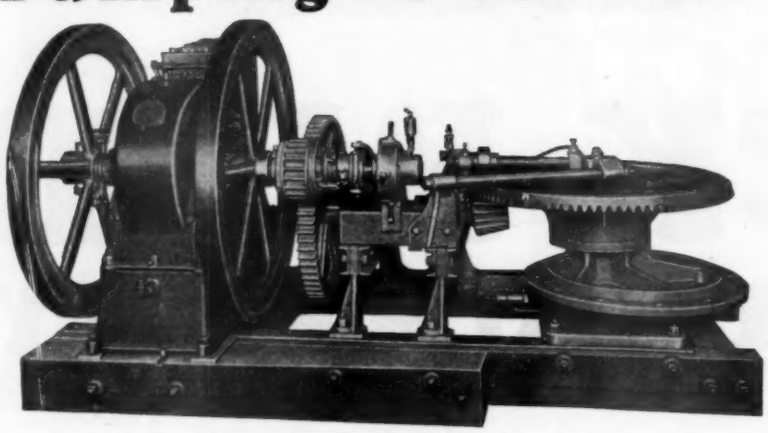
BAROID Drilling Mud

at Houston, San Antonio, Beaumont Shreveport, Monroe, Pampa and Pyote

Send us your orders or write today for prices and full information.

PEDEN IRON & STEEL CO.
HOUSTON – SANANTONIO – SHREVEPORT

Lightning Oil Well Pumping Power No. 3



Inverted Drive Gear. A Full 18" Stroke.
Main Eccentric Shaft 4½" Dia. Hub Bearing 17" Long.

FULL AUTOMATIC POSITIVE LUBRICATION

Equipped 12 h. p. Stover Engine, Madison-Kipp Lubricator, or without engine, especially built for electric motor drive. Double gear reduction. No Counter shaft required.

Also—Lightning Beam Hangers, Pumping Jacks, Swings, Stuffing Boxes, Etc.

KANSAS CITY HAY PRESS CO., Kansas City, Mo.

Cherokee Fee 1, dr 205 ft. Rector Oil Co.'s State Fee 1, spd and sd. Selby O&G Co. et al's Dooley-Jones 1, elev 2661 ft, stdz 2205 ft.

WINKLER COUNTY—Amerada Pet. Co.'s Walton 1, elev 2833 ft, making gas, fsh tools 2502 ft. V. T. Bolin & Co. et al's Brown 1, elev 2847 ft, top salt 1302 ft, cmt cas 2500 ft. Danciger O&R Co. et al's Sealy 1, top salt 1085 ft, dr 2130 ft. Gibson-Johnson et al's Leck-Daugherty 1, elev 2883 ft, top salt 1980 ft, top lime 2687 ft, mudding off 28,000,000 feet dry gas 3070 ft. Independent O&G Co.'s Cowden-McCabe 1, elev 2826 ft, flowing 190 bbls oil daily, sd 3061 ft. Roxana & Llano Oil Co.'s Scarborough 2, elev 2932 ft, top salt 1120 ft, top lime 2960 ft, running with hfo 3108-3304 ft. Sid Richardson et al's Stockton Cattle Co. 1, dk. Southern Crude & R. A. Westbrook's Hutchings 1-T-90, trying sidtrk stem, td 2706 ft.

SOUTHWEST TEXAS
Completions

Company, Well and Location	Initial Production Bbls.	Depth
DUVAL COUNTY—		
R. Driscoll, Fee 11, sec 23	¶30	2454
CALDWELL COUNTY—		
Dr. James Bute, Branyon 2, 5 mi s Lockhart	2500	2144

CALDWELL COUNTY—Joe Bruner et al's Wilson 1, will resume dr. Claude Smith et al's Lancaster 1, Branyon district, mvg on. Dexter Oil Co.'s August 1, lcn. Radcliff et al's Briscoe 1, 3 mi ne Luling, stdg. United North & South's Tiller 2, Luling, dr 7285 ft, schist; Kelly 1, Luling, dr schist 7630 ft. The Texas Co.'s Medford 1, Branyon district, ru.

DUVAL COUNTY — Edward St. Albans' Hyatt 1, dr 3075 ft. National Oil Co.'s Bell 1, standing 2175 ft, gbo. Partee et al's Hahl 1, blk 16, sec 250, dr 2300 ft. R. Driscoll's Fee 11, sec 23, comp for ¶30 at 2454 ft.

HIDALGO COUNTY—Dale Smith's Daskan 1, standing 3235 ft. Queen City O. & G. Co.'s American Land & Irrigation Co. 2, 3 mi n Mercedes, td 135 ft, gbo.

JIM HOGG COUNTY—Shaw's Jones 1, blk 12, sec 381, Hebronville, dr 2420 ft. W. C. Berg's Hinnant 1, blk 9, sec 19, n of Randado field, lcn.

JIM WELLS COUNTY—Cushing Oil Co.'s Perez 1, 3 mi n Alice, td 1115 ft, shale.

KINNEY COUNTY—Stephens et al's Clamp 1, standing 1030 ft, shale and lime.

LIVE OAK COUNTY—Harper et al's Nichols 1, e Calihan, standing 1170 ft.

MAVERICK COUNTY—Rycade's Chittam 2, Eagle Pass, dr 5335 ft, lime. Ryan Consolidated's India Land Co. 1, 24 mi se Eagle Pass, prep to pull cas.

NUECES COUNTY—May et al's Gallagher 1, 12 mi w Corpus Christi, sd.

SAN PATRICIO COUNTY—Mission Drlg. Co.'s Cage 3, sw Odem, lcn. National Oil Co.'s McMullen sur 1, dr 2390 ft, shale. Pardee Pet. Co.'s Bell 1, w Mathis, sd 2850 ft.

STARR COUNTY—The Texas Co.'s Guerra 1, dr 2850 ft, sand.

VAL VERDE COUNTY — East Del Rio's Weatherbee 1, standing 3335 ft. Thraves et al's Wilson 1, standing 905 ft. Valvert Oil Co.'s Bassett 1, lcn.

SOUTH LOUISIANA
Completions

Company, Well and Location	Initial Production Bbls.	Depth
CALCASIEU PARISH—		
Union Sulphur Co., Fee 723, Sulphur Dome	1250	3280
CAMERON PARISH—		
Yount-Lee Oil Co., State Land 10, Hackberry	2000	3935
IBERIA PARISH—		
Gulf, State Z-4, Loreauville	100	1180

ASCENSION PARISH — Gulf's United Lands Co. 7, Sorrento Dome, ru. John J. Finnorn's Pertuis 1, 1 mi ne Sorrento, fsh for drill stem at 2475 ft. Acme Prod. Co.'s De-Haas-Eby 1, Sorrento, dk. Triumph Oil Corp.'s J. D. Lacey et al 1, 1½ mi se Sorrento, lcn.

CALCASIEU PARISH—Union Sulphur Co.'s Fee 723, Sulphur Dome, flowing 1250 bbls pipe line oil from 3280 ft; Fee 725, Sulphur Dome, ru; Fee 726, Sulphur Dome, ru; Fe 727, Sulphur Dom, ru.

CAMERON PARISH—Pure Oil Co.'s Sweet Lake 2, Sweet Lake, standing 5100 ft; Sweet

Lake 3, working over; Sweet Lake 4, fsh, td 5924 ft; Sweet Lake 5, working over, td 5660 ft. La. Land & Eplo. Co.'s Calcasieu Lake B-1, ½ mi ne Kelso Bayou dome, dr 3260 ft, hit cap rock at 3250 ft. Calcasieu Oil Co., Magnolia & Union Sulphur Co.'s Caldwell 2, Kelso Bayou dome, completed for 900 bbls oil late last week, but now making only about 100 bbls oil with 90 per cent water, will deepen, td now 4215 ft; Doiron 2, lcn. Noble et al's Ellender 1, Hackberry, will put on beam. Roxana's Watkins Est. 1, Black Bayou dist., coring anhydrite 1665 ft. Yount-Lee Oil Co.'s State Land 8, Hackberry, set and cmt cas at 3915 ft, td of hole 3940 ft; State Land 9, Hackberry, dk. State Land 10, Hackberry, completed at 3935 ft for 2000 bbls oil through ½-in choke.

IBERIA PARISH—La. Land & Explo. Co.'s Vermilion Bay A-2 dr 100 ft. Gulf's State Z-4, Loreauville, completed as 100-bbl pumper at 1180 ft. Broussard et al 2, Loreauville, ru. Jefferson O. & Dev. Co.'s Jefferson Island 2, dr 5305 ft, gbo.

IBERVILLE PARISH—Union Sulphur Co.'s Schwing 2, Bayou des Glaise dome, dr 2315 ft, sand and shale.

JEFF DAVIS PARISH—Scroggins et al's Purveiance 1, Welsh, dr 1300 ft.

LA FOURCHE PARISH — Gulf's Stark et al 3, Thibodaux, dr 1000 ft.

ST. MARTIN'S PARISH—Rycade's Fee 3, Bayou Boullion, dr 2750 ft; Fee 2, Bayou Boullion, swabbing 500 bbls.

COMPLETIONS

(Continued from page 92)

WILBARGER COUNTY—		
Barkley-Meadows, Waggoner 3-A	130	2374
Phillips Pet. Co., Waggoner 18-D	30	2368
The Texas Co., Waggoner 8-B	20	2376
YOUNG COUNTY—		
Atlantic & Casey, Brainard 1	*	670
Bowen et al, Brooks 1	*	525
Cooper & Goldsmith, Adams 1	*	600
Cunningham et al, Hawkins 6	30	516
Hawkins 7	70	521
P. F. Gwynn et al, Kunkel 1	60	1143
Kelleher & Rogers, Stratton 1	*	602
Kerbow & Albright, Voden 1	*	700
Madden & Hunt, Kilcrease 1	*	1055
Nash & Windfohr et al, Williams 1 ¶½ and	25	1690
Panhandle Ref. Co., Hawkins 1	*	509
Reed & Wooten, Keen 1	*	645
Pitzer & West, Graham 1	*	2185
Riggs et al, McKinley 5	130	589
Roberts Oil Corp., Bush 1	*	2501
Shappell Oil Co., Johnson 8	7	524
Johnson 9	10	530
Stafford et al, Langston 1	4	605
The Texas Co., Gregg 1	*	851
Wichita Prod. Co., Farmer 1	*	1150
Wise & Jackson, Rowley 1	*	605

EAST TEXAS

HARRISON COUNTY—		
Waterman Drlg. Co., Hickman 6, E. Pollack sur	¶1/5	2453

Pumping Equipment Plant in Fort Worth

Fort Worth, Texas.—Petroleum Equipment Company announces completion of a modern plant here, to be devoted to the manufacture of oil well pumping equipment. The plant embodies all modern features for making equipment used in pumping.

The company was organized by Dixon T. Harbison, formerly plant superintendent with Norris Brothers, in which capacity he served for many years. Mr. Harbison has announced that the company will specialize in the production of balls and seats and working barrel valves of non-corrosive steel.

Particular attention will be given to requirements of the Mid-Continent.

DONT Say... TEMPER SCREW Say... BURNS! TUBULAR Temper Screw

TEMPER BURNS SCREW

Be sure you use genuine Burns Parts

BURNS Tool Company

OKMULGEE · OKLAHOMA

PERMITS GRANTED FOR NEW WELLS

WEEKLY COMPARISON OF NEW WELLS

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas, California and the Mountain States:

	Week ending April 27	Previous week	Total this month	Total this year	This week last year	This month 1927	Total same date 1927	Year total 1927
Arkansas	19	2	30	73	5	33	150	329
California	33	13	79	346	39	149	546	1,226
Louisiana	13	16	59	240	23	71	198	812
Kansas	24	22	92	388	12	66	431	972
Oklahoma	71	48	242	1,038	92	341	1,539	3,702
Texas	174	174	699	2,432	184	738	3,819	8,665
Mountain States	..	..	..	..	25	92	261	494
Totals	334	275	1,191	4,507	380	1,423	6,708	16,149

LOUISIANA

ACADIA PARISH—Salt Dome Oil Co., Inc., New Orleans, Vallee Arpent 1, (amended permit), 47-9s-2w, 900 ft s and 80 ft e of nw c; Vallee Arpent 2, 47-9s-2w, 840 ft s and 80 ft e of nw c. Yount-Lee Oil Co., Beaumont, Texas, Crowley Oil & Mineral Co. 2, 48-9s-2w, 2142 ft e and 1275 ft n of sw c.

ASCENSION PARISH—Triumph Oil Corp., Inc., New Orleans, J. D. Lacy et al 1, 19-10s-4e, 500 ft s and 200 ft w of ne c.

BOSSIER PARISH — C. H. Lyons, et al, Shreveport, Marks Meyer 1, 36-23n-12w, 1980 ft n and 330 ft w of se c.

CADDO PARISH — Woodley Pet. Co., Shreveport, Mack Whitehurst 1, T 16n, R12w, 23,250 ft e and 2783 ft n of sw c.

CALCASIEU PARISH—W. T. Burton, Sulphur, Burton et al 1, 28-9s-11w, 366 ft w and 158 ft s of ne c.

CAMERON PARISH — Calcasieu Oil Co., Magnolia Pet. Co. and The Union Sulphur Co., Houston, Doiron 2, 37-12s-10w, 2320 ft e and 1842 ft s of nw c Sec 24 in Sec 37.

GRANT PARISH—Dr. Geo. J. Sabatier, New Iberia, Calhoun 3, 9-7n-4w, 150 ft s and 150 ft e of nw c nw nw.

JEFFERSON DAVIS PARISH—Welsh Pet. Co., Lake Charles, Purviance & Lahman 1, 24-9s-5w, 150 ft e and 150 ft s of nw c sw.

RICHLAND PARISH — Boeuf River Pet. Co., Monroe, Sartor 1, 9-15n-6e, 660 ft s and 660 ft w of ne c.

RICHLAND PARISH—W. C. Feazel, Monroe, Pardue 1, 32-16n-6e, 220 ft n and 1188 ft e of sw c.

WEBSTER PARISH—Humble O. & R. Co., Houston, Cox 3, 22-21n-10w, 330 ft s and 660 ft e of nw c ne. Bruce Richardson, Beaumont, Texas, Mayfield 1, 20-23n-9w, 660 ft n and 660 ft w of se c sw.

KANSAS

BUTLER COUNTY—Empire O. & R. Co. & Roxana Pet. Corp., Robinson 1, se c ne, 29-25-4e. Empire O. & R. Co., Brandenburg 1, ne c sw ne, 22-27-5e.

CHAUTAUQUA COUNTY—Griffeth, Bell et al, Oliver 5, se c ne nw, 1-32-10e.

COWLEY COUNTY—Cameron et al, Wise 1, se c sw, 30-31-3e. Trees Oil Co., Hittle 2, se c ne, 21-31-4e. Manhattan Oil Co., King 1, sw c nw, 22-31-4e. McCullough et al, King 1, nw c sw, 22-31-4e. Elmwood Oil Co., Ehmke 1, ne c nw, 14-32-3e.

ELK COUNTY—Union Gas Corp., Chaffine 14, sw c, 14-31-10e.

GREENWOOD COUNTY—Darby Pet. Co., Fankhouser 8, nw c se sw, 24-22-12e. Simmons & Rhodes, Schwab 3, nw c ne se, 30-22-13e. Hubbard & Marcus, Freeman 2, sw c se, 6-24-11e. Cross et al, Scott 1, ne c nw, 18-24-12e. Lassen et al, Gregg 1, sw c ne, 6-25-9e.

LYON COUNTY — Empire O. & R. Co., Lewis 1, se c sw ne, 18-21-10e.

MARION COUNTY — Phillips Pet. Co., Thompson 1, nw c sw, 26-17-4e. White Eagle O. & R. Co. et al, Meyer 1, ne c sw, 26-17-4e. Davis et al, Rampel 1, sw c nw, 7-19-3e.

SUMNER COUNTY — Palmer & Barnsdall Oil Corp., Wenrich 3-A, nw c ne nw, 23-32-2e.

WOODSON COUNTY—Big Indian Oil Co., Gardner 1, se c nw, 27-23-17e. LaDow et al, Settlemeyer 1, nw c ne se, 25-26-14e.

Thinking of Building a Natural Gasoline Plant?

If you are, Write to THE REFINER AND NATURAL GASOLINE MANUFACTURER which deals with that phase of the oil industry—for a sample copy.

The Refiner and Natural Gasoline Manufacturer will also be able to put you in touch with companies building such plants.

P. O. BOX 1307, HOUSTON, TEXAS

ARKANSAS

OUACHITA COUNTY—Little Fay Oil Co., Robertson 7, 25-15-16, sw c ne nw. F. B. Wood Trs., Spahr 1, owd, 35-15-16, 150 ft n and 480 ft, w of se c ne ne (formerly Arkansas Maricopa Oil Co.'s Lewis 1).

UNION COUNTY—H. L. Hunt, Gregory 1, 10-17-14, se c sw se. W. R. Keever, Ezell A-6, 12-17-15, se c ne. Magna Prod. Co., Dumas 2, 11-17-14, 330 ft s and 150 ft, w of ne c nw sw; Dumas 3, 11-17-14, 660 ft n and 150 ft e of sw c ne nw sw. Magnolia Pet. Co., Carroll 3, 1-17-14, 330 ft s and 600 ft w of ne c se ne. C. E. Murdock, Gregory 2, 10-17-14, 225 ft w and 150 ft n of se c ne se. Ohio Oil Co., Adams 1, 11-17-14, 150 ft w and 175 ft n of se c w½ sw nw. Ohio Oil Co., Lochner 1, 11-17-14, 150 ft n and 150 ft e of sw c se nw. Ohio Oil Co., Rowland 1, 15-17-14, 160 ft s and 200 ft w of ne c se ne; Smith 1, 1-17-14, 330 ft w of se c ne ne. Ouachita Nat. Gas Co., Perdue 1, 33-16-14, nw c nw nw. Ouachita Nat. Gas Co., Perdue 1, 33-16-14, nw c nw nw. Pure Oil Co., Gregory 2, 11-17-14, 200 ft n and 200 ft e of sw c; Gregory 3, 11-17-14, 150 ft s and 150 ft eof nw c sw sw; Gregory 3, 11-17-14, 150 ft s and 150 ft e of nw c sw sw; Gregory 4, 10-17-14, 201 ft w and 180 ft n of se c se se; Gregory 5, 10-17-14, 150 ft n and 215 ft e of sw c se se; J. M. Gregory 1, 11-17-14, 510 ft s and 150 ft e of nw c ne sw; Gregory Estate 1, 15-17-14, 160 ft s and 215 ft w of ne c nw ne.

OKLAHOMA

CADDO COUNTY—Caddo Oil Co., Cutshell 3, nw ne se, 5-5n-9w.

CARTER COUNTY—Sinclair O. & G. Co. and Gypsy Oil Co., Morris 2, sec ne, 29-2s-3w. Humble, Ratliff 4, nw ne sw, 20-1s-3w.

CREEK COUNTY — Prairie O. & G. Co., Thornburg 1, nw ne ne, 7-15-7e. Pensey Oil Co., Cain 3, c w l ne ne, 18-17-7e. Wilson et al, McNac 1, ne c sw, 25-17-8e. McMann Oil Co., Samples 1, ne se ne, 35-20-8e. J. J. Shock O. & G. Co., Harjo 1, ne nw ne, 26-14-10e. C. G. Tibbens, Carmen 1, sw c nw, 29-15-9e. C. G. Tibbens, Tiger 1, sw c se, 27-15-8e. J. H. Markham, Beesley 6, se c nw, 20-17-7e. Stebbins Oil & Gas Co., Mosquito 1, nw c sw ne, 36-19-9e. W. E. Holmes et al, Halsey 1, nw c se, 28-19-9e.

GRADY COUNTY — Commerce Dev. Co., Parks 2, nw sw sw, 13-4n-8w; Pond 2, se nw sw, 13-4n-8w. Okla. Gas Utilities Co., Woods 3, se ne nw, 2-4n-8w. Carter Oil Co., McCaughtry 6, nwc ne nw nw, 26-5n-8w.

JEFFERSON COUNTY — Skelly Oil Co., Ryan 3, ne se se, 23-6s-6w.

KAY COUNTY—C. A. Leonard et al, Buessing 1, c w l e½ ne se, 20-27-1e. Martin et al, Buessing 2, c nw nw, 9-27-1e. Carter Oil Co. & Ona Oil Co., Johnson 1, c se ne, 18-29-1e. McDorman et al, Campbell 1, se c sw, 32-29-1w.

MUSKOGEE COUNTY—A. Tillman, Jackson 2, nwc ne sw, 8-14-19e. J. S. Routt, Kelly 1, sw c ne nw, 8-14-19e. Hillcrest Oil Co., Kell 1A, c ne ne nw, 7-14-19e. J. A. Staley et al, McDaniel 3, c w l nw se se, 6-14-19e. Olean Pet. Co., Townlot 2, c se ne sw, 6-14-19e. Crippy et al, Cobb 1, ne c nw sw, 6-14-19. H. C. Becker et al, Kelley 2, c e l nw se ne, 5-14-19e. E. H. Dewell et al, Ballard 1, se c sw, 3-14-19e. J. A. Evans et al, Thompson 1, sw c nw sw, 2-14-19e. J. A. Barbre et al, Drake 1, c nw ne, 12-14-18e. O. R. Tautenhahn, Callahan 1A, se c ne se, 3-14-18e. Shaffer & Heflin, Robison 1, se c, 36-15-18e. Jolly Ogg Oil Co., Serrell 1, ne c se ne, 21-15-15e.

OKMULGEE COUNTY — F. D. Misener, Colbert 1, se c nw, 14-14-14e. A. G. Hazlett, Fields 3, c w l nw ne, 33-13-13e. Transcontinental Oil Co., Peters 1, c n l nw se, 34-16-14e. L. Nourse et al, Rowe 1A, se c ne nw, 20-15-14e. L. C. Wheeler, Throckmorton 1, ne c nw, 32-15-13e.

OSAGE COUNTY—Peters Pet. Co. & Producers & Refiners Corp. 1, nw c se, 32-24-9e. I. T. I. O. Co. 5, sw nw nw, 36-25-9e. Link Oil Co. 1, c n l se, 34-25-9e. Smith Leahy et al 1, ne c se, 9-25-9e. W. J. Knupp 7, c e l w½ sw, 36-27-11e.

PAWNEE COUNTY—Grieves et al, Black-

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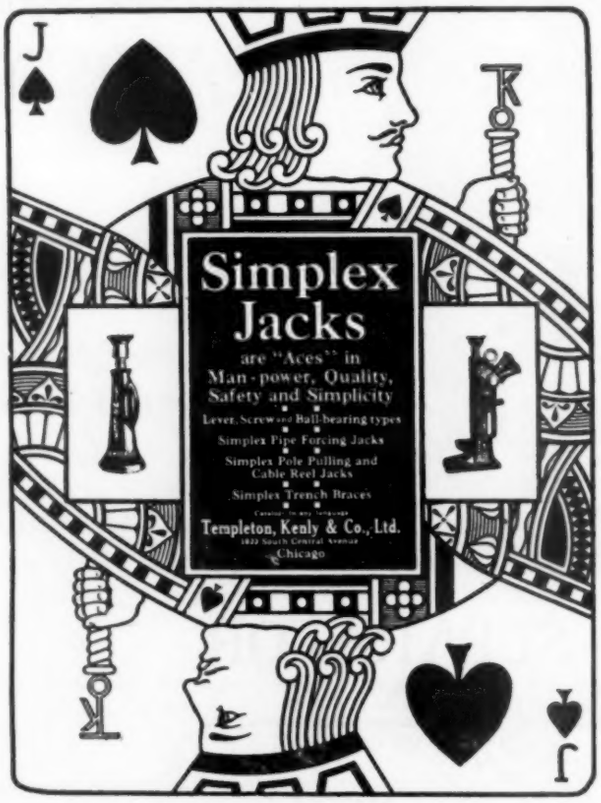

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POTTAWATOMIE COUNTY—Superior Oil Corp., Cloude 1, sw nw nw, 24-7-4e.

SEMINOLE COUNTY — Sinclair O. & G. Co., Nakoche 1, ne c sw, 18-5n-8e. Ramsey Culley 5, nw c sw sw ne, 18-5n-8e. Twin State Lowe 1, sw c ne, 25-8-6e. Sinclair Oil & Gas Co., Yarbrough 6, ne nw ne, 4-10-8e.

STEPHENS COUNTY—Magnolia Pet. Co. Wright 1, se ne se, 36-1n-4w. Magnolia Pet. Co. Helvy 1, ne nw nw, 24-1s-4w. Humble O. & R. Co. Peddycourt 4, sw ne ne, 25-1s-4w. Geo. Pace et al, Pennington 1, nw c sw ne, 18-2s-7w. Maer & Standforth, Bond 1, sw c se, 7-2s-7w. American Pipe Line Co., Bond 2, sw c nw sw, 7-2s-7w. Wirt Franklin Oil Corp., McMasters 1, ne c nw ne ne, 13-2s-sw; Fobb 4, se c ne se 12-2s-8w. Winkler & McQueen Hite 1, sw c ne, 35-1s-8w. Magnolia Pet. Co., Burke 5, nw c ne nw ne, 34-1s-8w. Roy Garter Burke 1, nw c se se, 34-1s-8w. Fisher et al, Nelson 1A, nw c se ne, 28-1s-8w. Clark & Cowden Williams 1, ne c nw se, 31-1n-8w. Brannon et al, Funk ?, se sw se, 19-1n-8w.

TILLMAN COUNTY—Everts et al, Indian 1, sw c nw ne, 11-5s-13w.

TULSA COUNTY—Nowata Oil & Ref. Co., Bedray 4, sw c ne se, 30-19-12e. Glidden Oil Corp., Johnson 4, c n l sw ne, 15-19-11e.

WAGONER COUNTY—Crosbie et al, Grayson 4, ne c se, 15-16-14e. Brophy & Lumel Gibson 1A, ne c nw nw, 17-16-15e.

CALIFORNIA

BREA-OLINDA—Union Oil Co., Naranjal 13, 2-3-10. Brea Canon Oil Co., No. 44, 2-3-10.

BELRIDGE—Berry Oil Co., No. 90, 30-28-21; No. 91, 30-28-21.

INGLEWOOD—Standard Oil Co., B-C, 72, 16-2-14.

HUMBOLDT COUNTY — Revert Mining Co., No. 1, 6-3-1.

KERN COUNTY—Milham Exploration Co., Kern 5, 5 28-23.

KERN FRONT—Clyde De Lano No. 1, 34-28-28. Brownmoor Oil Co., Cauley 11, 16-28-27; Cauley 32, 16-28-27. Botts Pet. Co., Sturgeon 5, 25-28-27.

LONG BEACH—California Pet. Corp., S-5, 3-5, 30-4-12; H-10, 19-4-12; H-11, 19-4-12. Universal Consolidated Oil Co., J-2, 28-4-12. Shell Co., A-33, 29-4-12; G-6, 29-4-12; K-G 5, 29-4-12; S-5, 29-4-12; S-3, 29-4-12. Rio Grande Oil Co., B-8, 28-4-12. Hancock Oil Co., S-9, 29-4-12. Shell Co., D-6, 29-4-12. Richfield Oil Co., B-11, 29-4-12.

MIDWAY—Standard Oil Co., No. 229, 7-32-24.

MT. POSO—Signal Gasoline Co., Inc., No. 2, 27-27-28. Alfred L. Marsten, 34-27-28.

OJAI—Continental Oil Co., 1-M, 21-4-22.

RINCON—Wilshire Oil Co., H-1, 7-3-24. General Pet. Co., T-2, 8-3-24. Southern Pacific Land Co., No. 4, 8-3-24.

SUNSET—Midway Northern Oil Co., No. 1, 7-11-23.

TORRANCE—Chanslor-Canfield Midway Oil Co., T-92, 10-4-14.

VENTURA—Associated Oil Co., L-56, 27-3-23.

TEXAS

ARCHER COUNTY—E. R. Marts, Dallas, Prideaux 1, blk 8, A. McMullen sur, 300 ft from w and 450 ft from s line. Sun Oil Co., Dallas, Andrews B 1, blk 140, R. Carson sur, 1398 ft from e and 150 ft from s line. H. C. Wright, Abilene, Wilson 3, S 2, J. W. Scott sur. Petroleum Prod. Co., Wichita Falls, Wilson E 3, blk 13, Geraldine sur, 300 ft e of 2. Humble, Wichita Falls, Hamilton A 1, BBB&C sur, 750 ft from n and 150 ft from e line. F. P. Rose, Wichita Falls, Campbell 1A, I. Holman sur, 150 ft from e and 450 ft from s line. Christie Bros., Wichita Falls, Jones 4, S 5, S. P. Ry. sur, 900 ft e of 3. Consolidated Oil Co., Wichita Falls, Lisle 1, blk 3, L. M. Meade sur, 150 ft from n and e lines. United Prod. Co. et al, Wichita Falls, Kemp & Kell 1, blk 9, Holliday sur. W. J. Moran, Wichita Falls, Parkey 1, S 11, H&TC sur, 50 ft from s and w lines. Stidham & Thrasher, Electra, Neilson 1, blk 20, P. P. C. S. L. sur, 150 ft from s and w lines. E. J. Stump & Co., Wichita Falls, Wallace 1, D. C. S. L. sur, 150 ft from s and e lines. Archer Drilling Co., Wichita Falls, Thompson 1, blk 20, Amer. Trib. sur, 150 ft from s and w lines. G. P. Burton, Wichita Falls, Parrish

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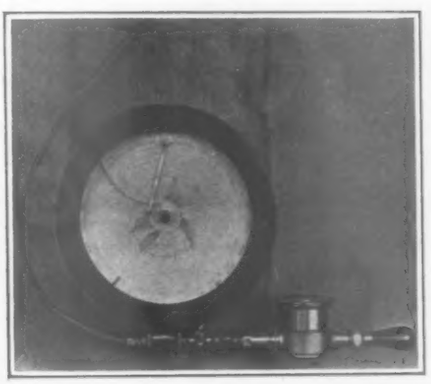
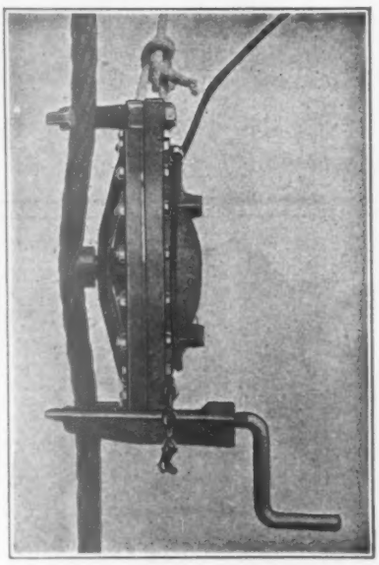
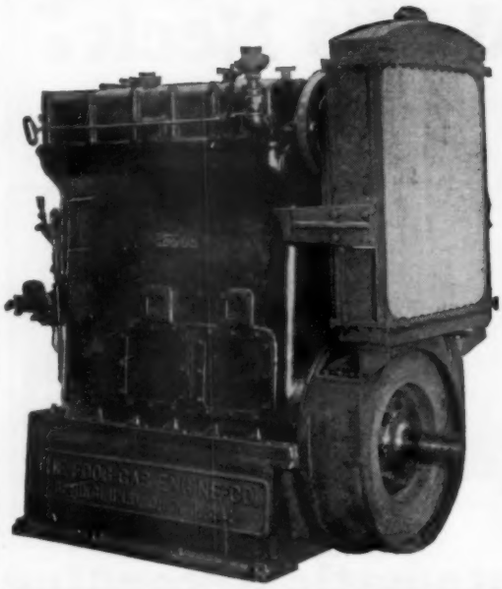


Recording instrument in belt house which writes a permanent graphic record of all operations at the drilling well throughout each 24-hour day.



Bronze case containing rubber diaphragm attached to deadline.

POWER



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1, S 2, S. P. Ry. sur, 150 ft from n and e lines.

ARMSTRONG COUNTY—United Eight Oil Co., Madill, Okla., Reck 1, S 162, blk B4, H&GN sur, 150 ft from n and 300 ft from w line.

BROWN COUNTY—Bailey, Love & Michel, Cisco, Lawson 1, L. G. R. King sur, 150 ft from s and w lines. Henshaw Oil Corp., San Angelo, Bush 10, No. 624, J. Kennedy sur, 150 ft from n and 450 ft from w line; 11, 1500 ft from n and 150 ft from e line; 12, 1200 ft from n and 450 ft from e line; 9, 450 ft from w and 150 ft from s line; Cross 1, No. 624, J. Kinney sur, 150 ft from n and w lines; 2, 300 ft s of 1. Humble, Cisco, Lewis 1, No. 143, E. Mather sur, 150 ft from s and e lines. J. H. Fuecher et al, Eastland, Sebriedge 1, S 32, H&TC sur, 150 ft from n and e lines. Shuler Davies Co., Brownwood, Boysen 2, W. Ahrenbeck, ne corner. Baker & Hodges, Brownwood, Eubanks 1, R. Mitchell sur, 150 ft from n and 450 ft from e line. Midland Oil Co., Fort Worth, Butler 3, T. Benson sur, 450 ft from n and 150 ft from e line. J. H. Green et al, Brownwood, Bull 1, R. Honeycutt sur, 575 ft from w and 200 ft from s line. G. P. Mitcham, Cisco, Thompson 1, J. McClelland sur, 450 ft from w and 750 ft from s line. Gilman & McMurray, Cisco, Hickman 3A, No. 783, T. Benson sur, 300 ft n of 2. Phillips Pet. Co., Bartlesville, Okla., Hickman 13, No. 783, T. Benson sur, 450 ft w of 11.

BEXAR COUNTY—Schimmel Prod. Corp., Fort Worth, Koehler 26, No. 265, J. Wilson sur, 250 ft from n and 150 ft from w line; Tick 4, blk 265, J. Wilson sur, 680 ft w of 2.

CALLAHAN COUNTY — Grass Roots Oil Co., Fort Worth, Connally 1, blk 44, C. C. S. L. sur, 450 ft from n and 150 ft from w line. Robert Watchorn, Oklahoma City, Finley 1, S 3, Bayland Asy. sur, 600 ft from e and 700 ft from s line. Dale Oil Corp., Wichita Falls, Wagley 3, 22996, TE&L sur, 150 ft from e and 450 ft from s line.

COLEMAN COUNTY—Red Bank Oil Co., Tulsa, May 1, S 27, blk 1, &H&H sur, center. Simons & Jones, Brownwood, Baker 1, S 630, M. A. Fisk sur, 150 ft from n and w lines. Ed. Puckett, Coleman, Neeb 1, S 181, blk 32, C. C. S. L. sur, 600 ft from e and 250 ft from s line. Elmer Green et al, Coleman, Dibrell 1, S 11, blk 16, HT&B sur, 150 ft from s and e lines. Archie Shaw, Burkett, Burns 40, No 168, A. Wickson sur, 1650 ft from n and 3150 ft from e line.

CROCKETT COUNTY — Transcontinental Oil Co., Tulsa, Atwood 1, S 7, blk PP, T. C. Ry. sur, 250 ft from n and w lines. Grayburg Oil Co., San Antonio, Halff B 8, S 70, blk 1, I&GN sur, 330 ft e of 7.

COOKE COUNTY—W. F. Russell, Gainesville, Marshall 1, A. Burns sur, e central.

CHAMBERS COUNTY—Pure Oil Co., Fort Worth, Trinity River 1, Permit No. 11652; Lost Lake 1, Permit No. 11681 sur, ne corner. Humphreys Corp., Houston, Barber A1, H. Griffith sur, 400 ft from se and 150 ft from sw line.

CLAY COUNTY—Eastern Pet. Corp., Wichita Falls, Wright 1, 2632, TE&L sur, 150 ft from n and 410 ft from e line.

CARSON COUNTY—Winrod Oil Co., Amarillo, Cooper 1, S 3, blk 9, I&GN sur, 300 ft from w and 990 ft from s line.

DUVAL COUNTY—Magnolia, Dallas, Benavide 5, M. Arispe sur, 50 ft from n and 75 ft from w line.

FORT BEND COUNTY — Gulf, Houston, Luscher 13, T. Hobermaker sur, 50 ft s of center of n line. S un Oil Co., Beaumont, Farmer 2, J. Scott sur, 250 ft from w and 230 ft from s line. Vacuum Oil Co., Houston, Levy 1, T. Barnett sur, 665 ft from n and 3890 ft from e line.

GRAY COUNTY — South Bend Oil Corp., Tulsa, Case 1, S 180, blk B2, H&GN sur, 330 ft from s and e lines. Prairie O&G Co., Ranger, Reynolds 1, S 61, blk 3, I&GN sur, 330 ft from n and e lines. Gulf, Fort Worth, Davidson A 1, S 87, blk B2, H&GN sur, 330 ft from n and w lines. Alco Royalty Corp., Tulsa, Finley 1, S 17, blk S, B. F. Chaney sur, 330 ft from s and w lines.

GUADALUPE COUNTY — O. W. Killam, Laredo, Bailey 1, G. W. Bailey sur, ne corner.

HARRIS COUNTY — Navarro Oil Co.,

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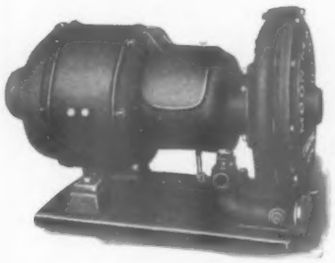

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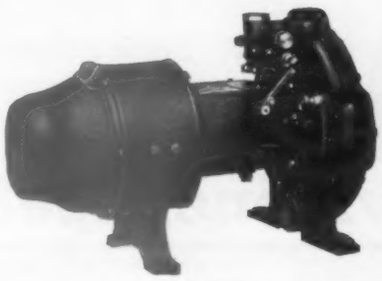

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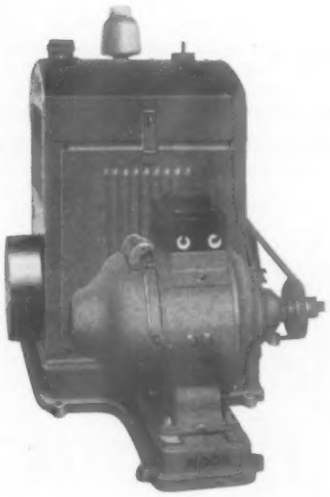
For Rotary rigs, camps, refineries and larger jobs.



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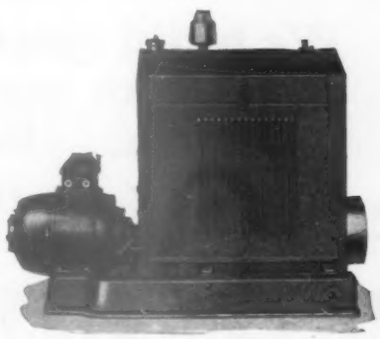

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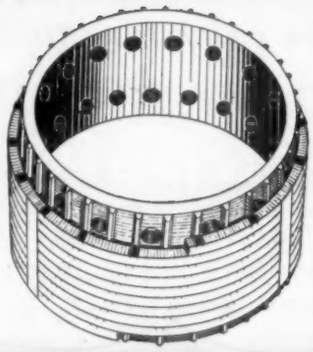


Houston, Dolley 10, J. Hamilton sur, 490 ft from s and 335 ft from e line. Cullen & West Prod. Co., Houston, Drummett 1, W. H. Sanders sur, 900 ft from e and 300 ft from s line. Rio Bravo Oil Co., Houston, Settegast A10, J. Kopman sur, 1200 ft from n and 350 ft from e line.

HIDALGO COUNTY—Queen City O. & G. Co., Mercedes, American Land Co. 2, blk 82, Amer. Land Co. sur, s central.

HARDIN COUNTY—Hill & Dowell, Batson, Buchanan 96, blk 12, J. Milholme sur, 1090 ft from e and 22 ft from s line. Rio Bravo Oil Co., Houston, Fee J80, C. F. S. Jorditt sur, 175 ft w of J81; J83A, 20 ft e of J83; J81A, 20 ft w of J 81.

HARTLEY COUNTY — Amarillo Oil Co., Amarillo, Bivins A 7, S 7, blk 25, EL&R sur, 1320 ft from n and e lines; Bivins 9, S 6, blk 21, CCS sur, 1320 ft from n and w lines.

HOWARD COUNTY—Merrick & Bristow, Ardmore, Okla., Hooks 5, S 140, blk 28, W&NW sur, 448 e of 4. F H E Oil Co. & Flemming & Kimbell, Sherman, Roberts E2, S136, blk 29, W&NW sur, 200 ft from w and 300 ft from s line.

HUTCHINSON COUNTY — Phillips Pet. Co., Bartlesville, Okla., Dorsett 5, S 64, blk 46, H&TC sur. Barnum Oil Co. of Delaware, Amarillo, Sanford 1, S 78, blk 46, H&TC sur, 330 ft from s and e lines; Johnson 1, S 37, blk Y, H&TC sur, 330 ft s of center of n line; Sanford 1, S 81, blk 46, H&TC sur, 330 ft from n and w lines; Cheatham 1, S 38, blk Y, H&TC sur, 330 ft from s and e lines. Harris & McKinney, Amarillo, Dunaway 1, S5-7, blk Y2, 330 ft from s and w lines.

IRION COUNTY — West & Neeley, San Angelo, Suggs 1, S 19, blk 1, H&TC sur, center. Kimbrough & Tuel, San Angelo, Nutt 1, S 5, Gonzales sur, 200 ft from n and w lines.

JEFFERSON COUNTY—Yount-Lee Oil Co., Beaumont, McFaddin 66, P. Humphreys sur, 162 ft from e and 1475 ft from n line; Gladys 57, blk 99, J. A. Veatch sur, 80 ft from e and 10 ft from n line; 58, blk 57, J. A. Veatch sur, 95 ft from e and 297 ft from s line.

JIM HOGG COUNTY—Moody Corp., Houston, Palacios 10, S 291, blk 22, 150 ft from n and 450 ft from e line.

JACK COUNTY—J. L. Collins & Co., Corsicana, Carter 2, J. W. Williams sur, 700 ft e of 1. E. W. Walton, Jacksboro, Gillespie 1, Wm. Berryman sur, 150 ft from s and e lines. O. F. Whitaker, Jacksboro, Roach 2, Berryman sur, 150 ft from s and e lines.

KLEBERG COUNTY—Humble, Houston, Kivlin 2, S 39, blk 1, KT&I sur, 100 ft from n and 150 ft from e line; Dennett A 5, S 39, blk 4, KT&I sur, 150 ft from n and 550 ft from w line.

LIBERTY COUNTY—Sun Oil Co., Dallas, Texas, Fee 1, M. G. White sur, 50 ft from n and 75 ft from w line.

MONTAGUE COUNTY — Continental & Bridwell Oil Co., Wichita Falls, Cunningham 1, T. R. Edmondson sur, 450 ft from n and 150 ft from e line. Arco Oil Co., Wichita Falls, Loy 6, Wm. Donoho sur, 300 ft n of 1. Continental & Bridwell Oil Co., Wichita Falls, Cunningham 1, T. R. Edmondson sur, 150 ft from e and 4811 ft from s line. W. R. Bourland, Wichita Falls, McGaughey 1, C. Chacon sur, 150 ft from s and w lines.

MOORE COUNTY—Amarillo Oil Co., Amarillo, Sneed 1, S 51, blk 6, EL&R sur, 1320 ft from s and e lines; Bivins A 6, S 32, blk B11, EL&R sur, 330 ft from n and w lines.

MEDINA COUNTY—Carl & Yantis, San Antonio, Neuman 1, No. 1, 531 ft from e and 936 ft from n line.

MILAM COUNTY—W. A. Jones, Minerva, Phillips 7, T. J. Chambers sur, 300 ft se of 3; W. S. Guthrie, Rockdale, Texas, Wilkins 1, Wm. Allen sur, 550 ft from n and w lines.

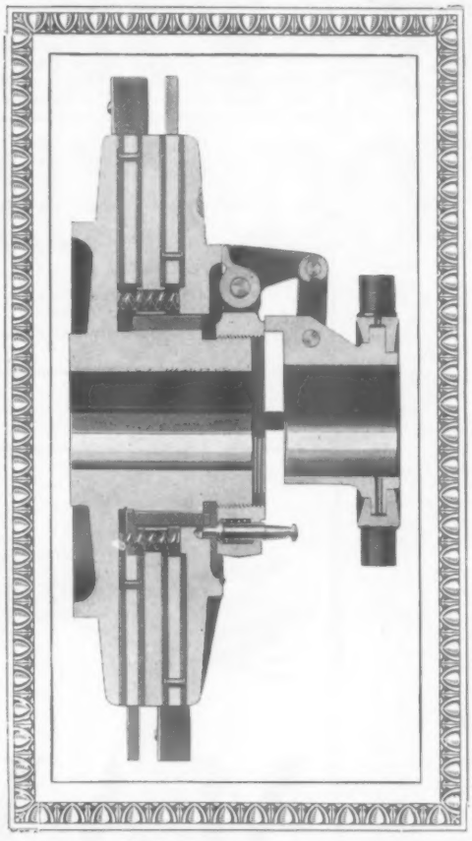
MENARD COUNTY—Moody Corp., Corsicana, Allison 1, 1473, J. Kuhler sur, 200 ft from s and e lines.

McCULLOCH COUNTY—A. J. Halsell et al, Lohn, Walker 1, S 91, H&TC sur, 150 ft from s and e lines.

NUECES COUNTY—Keith & Kaye, Corpus Christi, Wm. Gingrich 1, McIntyre sur, sw corner.

PANOLA COUNTY — N. P. Hutchinson, Shreveport, La., Roquemore 3, B. C. Jordan sur, sw corner.

PECOS COUNTY—Mid-Kansas O. & G. Co.,



TO INSURE the utmost in operating efficiency and in profit to the user of modern oil field production machinery, the Twin Disc clutch offers these advantages:

1. Capacity to start, carry or hold any load for which it is recommended, with ample reserve for emergencies.
2. Constant maintenance of perfect adjustment to load, with no loss of operating time.
3. A fine quality of smooth engagement under load, with no tendency to seize or burn.
4. Instant release at the will of the operator.
5. Durability to insure a high standard of performance for the entire useful life of machine.

The Twin Disc clutch is made in sizes up to 36″ diameter. This range of sizes gives you every capacity ordinarily used. If desired our experienced engineers will assist in the engineering of the clutch into the machine. Write.

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We also manufacture the Shaffer Stationary Boiler Gauge Cock with chain attachment to operate from the floor. *Try a set.*

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All Parts Are Interchangeable

Made in two sizes, ½ or ¾-inch. Furnished with special all-metal wheel. Extra wheels 25c each.

SHAFFER
The Standard Boiler Gauge Cock

Tulsa, Okla., Smith-Taylor 15, S 33, blk 194, GC&SF sur, 2249 ft from n and 1320 ft from w line; Yates G 2, s33½, I. G. Yates sur, 1407 ft from n and 872 ft from w line; Yates A 19, S 33½, I. G. Yates sur, 250 ft e of center of w line. McMan O. & G. Co., Tulsa, Okla., M. A. Smith 2B, S 104, blk 194, T. C. Ry. sur, 1407 ft from n and 872 ft from e line.

RUNNELS COUNTY—Agnew & Sons, Inc., Texon, Russell 1, 13½, H. Hollien sur, 868 ft from se and 600 ft from sw line.

RUSK COUNTY — Texas Co., Houston, Goodwin 1, J. Smith sur, 150 ft from s and 530 ft from e line.

SHACKELFORD COUNTY — Ell Evans, Abilene, Isabell 1, TE&L sur, ne corner. Roeser & Pendleton, Inc., Fort Worth, J. Cook A3, S 62, E. T. Ry. sur, 1440 ft from n and 169 ft from w line. Tannehill, Kiser & Fleming, Albany, Mathews 3, S 33, E. T. Ry. sur, 450 ft from w and 150 ft from s line; 4, 150 ft from s and w lines. T. G. Shaw, Fort Worth, Rice 1, S 43, Bayland Asy. sur, 450 ft from n and w lines, Kingwood Oil Co. & Mee & Daniels, Abilene, Gorsuch 1, S 81, B 13, T&P sur, 220 ft from n and w lines. Kirk & Evans, Gorman, King 2, S 1, blk 14, 330 ft n of 1. W. J. Cluney et al, Breckenridge, Whitney 6, 512, TE&L sur, 450 ft from nw and 165 ft from ne line. Big State Oil Corp., Dallas, Russ-Webb 5, S 16, blk 11, T&P sur, 150 ft from w and 318 ft from s line. W. C. Holiday, Fort Worth, Alexander 1, S 6, L. A. L. sur, 160 ft from s and 200 ft from w line. Hutton Oil Corp. & Hughes, Cisco, Broyles 1, S 7, L. A. L. sur, 150 ft from n and 300 ft from w line. Roeser & Pendleton, Inc., Fort Worth, Cook A2, S 61, E. T. Ry. sur, 300 ft from w and 150 ft from n line. A. D. Robinson, Dallas, Blach B15, 391, TE&L sur, 300 ft nw of 14; B16, 300 ft nw of 13.

STEPHENS COUNTY—Texas-Fidelity Oil Corp., Fort Worth, J. M. Cook 2, S 26, blk 6, T&P sur, 600 ft from n and 900 ft from w line.

WICHITA COUNTY — Laning & Hanel, Wichita Falls, McCarty 3, S. M. Sanberg sur, 300 ft n of 2. R. P. Dorian, Wichita Falls, George 5, 818, TE&L sur. R. N. Hamilton, Wichita Falls, Leisslor 1, No. 1, C. T. Ry. sur, 1050 ft from n and 1170 ft from w line. W. H. Hammon et al, Wichita Falls, McCarty 1, W. R. Eaves sur, 300 ft w of 2. Swanner & Williams, Wichita Falls, Williams-Parker 1, J. McCool sur, 450 ft from n and 971 ft from e line. R. T. Belcher, Wichita Falls, Lowrance 2, S 27, T. C. S. L. sur, 350 ft w of 1.

WILBARGER COUNTY—Empire G. & F. Co., Wichita Falls, Waggoner 2A, S 41, MEP&P sur, 1810 ft from e and 1170 ft from s line. Texas Co., Wichita Falls, Waggoner D2, S 43, MEP&P sur, 205 ft from s and 1526 ft from e line. Shaw Oil Co., Wichita Falls, Waggoner 1, S 30, blk 4, H&TC sur, 150 ft from n and e lines. E. B. Lawson, Tulsa, Okla., Waggoner A 4, S 25, blk 4, H&TC sur, 200 ft from n and e lines.

WEBB COUNTY — Newton Drilling Co., Laredo, Bruni 1, blk 65, Arriba sur, 150 ft from e and 1770 ft from s line. Killam & Simms Oil Co., Laredo, Bruni 2, blk 65, Arriba sur, 150 ft from n and e lines. O. W. Killam, Laredo, Bruni 8, blk 64, Arriba sur, 150 ft e of center of w line.

WHARTON COUNTY — Gulf, Houston, Abendroth 4, S. F. Austin sur, 550 ft from ne and 50 ft from nw line. Sun Oil Co., Dallas, Thomas 1, S. F. Austin sur 50 ft from n and e lines. Ingram Prospecting Co., Houston, Barker 1, J. Huff sur, 600 ft from e and 65 ft from s line.

WASHINGTON COUNTY — Pratt-Hewitt Oil Co., Kemeczny 3, J. Williams sur.

WINKLER COUNTY—Flandell & Co., Kermit, Carter 1, S 26, blk B3, School sur, 330 ft from w and 640 ft from s line.

YOUNG COUNTY—Kleiner, West & H-Y Oil Co., Cisco, Rowley 1, 1915, TE&L sur, 1050 ft from n and 150 ft from w line; Langston 7, 1490, TE&L sur, 1050 ft from n and 150 ft from e line; 8, 450 ft from e and 150 ft from n line; Hawkins 3, 1914, TE&L sur, 300 ft s of 2. Riggs & Oliphant, Graham, McKinley 4, 1489, TE&L sur, 450 ft from n and 150 ft from w line; 5, 150 ft from n and e lines. G. A. Griffith, Abilene, Miller 4, blk 6, A. Rohus sur, 150 ft from n and 950 ft from w line. Wooten & Reed, Graham, Young Co. Lbr. Co.

PATENTS
Patents Obtained, Trade Marks, Patent Causes
JESSE R. STONE
Formerly Assistant Examiner United States Patent Office
Andrews, Streetman, Logue & Mobley
12th Floor Union N. Bk., Houston, Tex

Maurice Hirsch & Ben J. Brown
ATTORNEYS AT LAW
601-2-3 Goggan Bldg.
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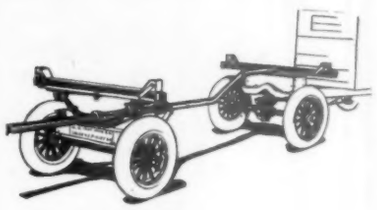

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Our engineers will gladly assist you in solving difficult transportation problems.

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It's *"Au Revoir"* and not *"Good-bye"*

When you start the GUIBERSON Underreamer on a long trip down, it's "au revoir" and not "goodbye." For you'll see it again—*all* of it.

In designing and building this tool, the resources of the Guiberson organization were devoted to producing an underreamer *without weaknesses.* The world's strongest underreamer was the result.

Oversize and extra strong cutters taper with an interlocking fit into a head forged from a solid steel billet. The strongest underreamer spring made holds cutters in position. A solid steel tongue—integral with the head—holds insides in.

An important feature of the GUIBERSON Underreamer is its special dressing form for quickly dressing cutters to EXACT gauge. Underreamer and dressing form are fully patented.

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Descriptions and prices on application.

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700 Baths

1, W. W. Porter sur, 150 ft from s and w lines. Shappell Oil Co., Wichita Falls, Cox 1, S. Sallee sur, se corner; Johnson 8, E. W. Sargent sur, 150 ft from e and 450 ft from s line; 9, 150 ft from w and 750 ft from s line. Madden & Hunt, Olney, Kilcrease 1, 1809, TE&L sur, 170 ft from w and 150 ft from n line. W. R. Stafford, Graham, Langston 2, 1490, TE&L sur, 150 ft from s and w lines. Shappell Oil Co., Wichita Falls, Johnson 10, E. W. Sargent sur, 450 ft from s and e lines. J. C. Cunningham, Loving, Nall 1, 1998, TE&L sur, 150 ft from s and e lines. W. C. Forbess, Fort Worth, Washburn 1, S 3, S. M. Wann sur, 1200 ft from e and 450 ft from n line. N. G. Goldsmith, Olney, Petty & Miller 1, 3404, TE&&L sur, 150 ft from n and 450 ft from w line. E. C. Stovall & Son, Graham, Fee 10, blk 51, J. Tobin sur, 100 ft nw of 9. J. M. Suttee, Fort Worth, Permit No. 2454 1, O. B. Colquitt sur, 150 ft s of center of n line. Martin & Cochran, Wichita Falls, Smith 1, 634, TE&L sur, 200 ft from n and 150 ft from e line. Ehorn et al, Graham, Garvey 1, No. 3, G&BN Co. sur, 653 ft from n and 1505 ft from e line. Perkins & Cullum, Wichita Falls, Stewart 13, D. Dawson sur, 300 ft s of 12. Pitzer & West, Breckenridge, Graham 1, B. Hill sur.

Independent Oil Producers Re-Elect Officers

Los Angeles.—The Independent Oil Producers' Agency, one of the largest marketing agencies in the world, recently met and re-elected L. P. St. Clair president, S. W. Morehead, vice-president and W. B. Robb, secretary. Mr. St. Clair, in his report to the agency, expressed the belief that the industry has passed through the worst point of depression and is definitely on the road to recovery. It was disclosed that the agency marketed more than 15,400,000 barrels of oil last year, with a value of $12,387,000. H. H. Welsh, Dave S. Ewing, H. D. Colson, George R. Harrison, W. W. Colm, E. E. Bailey, K. C. Wallace, C. H. Warlow, F. C. Van Deinse, W. L. Stewart, J. L. Guinn and C. L. Whittier were re-elected as members of the executive committee. The directors of the agency who will act in the same capacity during the coming year are J. B. Wells, E. E. Bailey, F. C. Berry, C. J. Berry, W. H. Berry, W. H. Boyd, W. W. Colm, H. D. Olson, Martin Coyne, A. J. Crites, Hugh B. Evans, D. S. Ewing, R. R. Fishell, Earl Fleisher, R. E. Graham, C. R. Hannaman, George R. Harrison, John H. Harding, H. T. Johnson, W. T. Knowles, C. Allandgren, John L. McGinn, Alex Miller, S. W. Morshead, H. P. Owen, M. C. Parker, George R. Peckham, C. E. Price, R. E. Rickard, W. B. Robb, E. S. St. Clair, Walter Snook, K. C. Wallace, W. R. Wardner, C. H. Warlow, A. Weill, H. H. Welsh, T. M. Young, F. C. Van Deinse, W. T. Zimmer, J. S. Goodwin, W. H. Bradley, T. F. Fox, F. V. Gordon, Herman Layer, T A. O'Donnell, W. L. Stewart, Henry Ericson, and G. W. Whittier.

J. R. McGinley has been transferred to Ponca City from Tulsa by Marland Oil Company, and will in the future serve as assistant to the head of the company's land department.

JOHN F. WEINZIERL
CONSULTING GEOLOGIST
ADVISOR ON GEOPHYSICAL INSTRUMENTS
619 Petroleum Bldg., Houston, Texas

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Field Gas Testing. Analysis of oil field brines, gas minerals and oil
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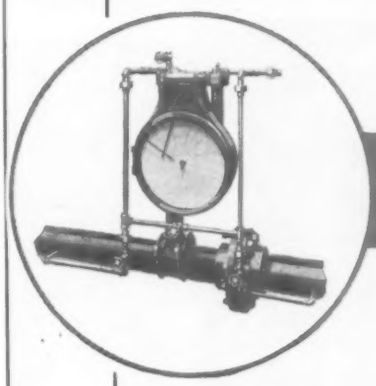
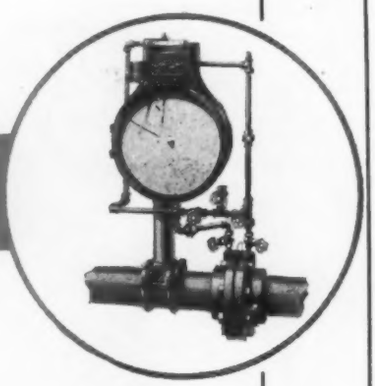
for every need





Metric orifice Meters are being used in increasingly large numbers in all types of plants handling and distributing gas, gasoline, oil, steam and water, since their value has become more widely known for detecting irregularities that thieve upon economy. They guard every operation more constantly and dependably than is possible by other mechanism or method.

Your plant may need the orifice Meter. We welcome the opportunity to examine your measuring problems from production to consumption so we may recommend (without obligation on your part) such installations as our experience has taught to be economical.

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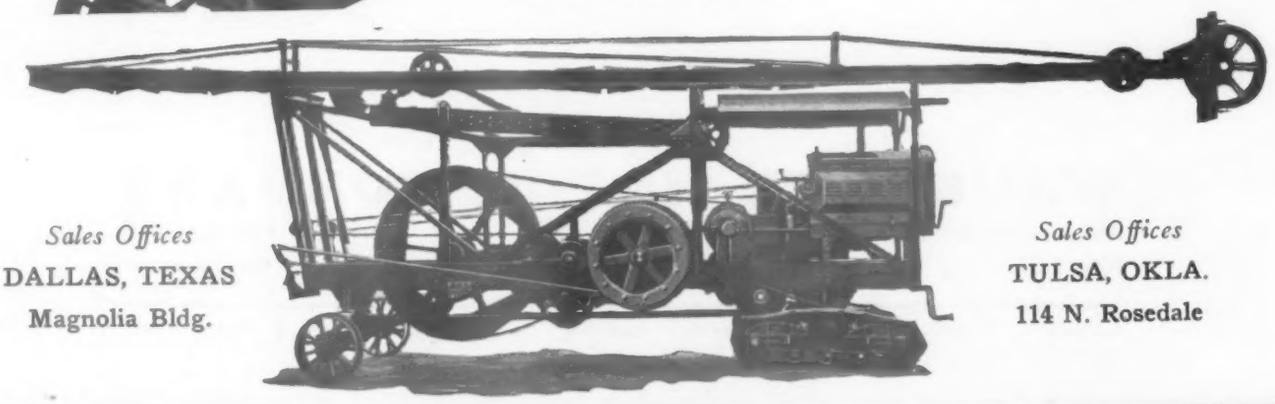
ALL levers controlling operation while drilling are at the front end of the machine—and in easy reach of the driller. As all motion originates through the twin disc clutch on drive shaft, one lever really controls every operation. This makes the "United" Sparta Drilling Machine a very simple machine to operate.

UNITED IRON WORKS, INC.
KANSAS CITY

"UNITED" IRON WORKS INC. FOR SERVICE



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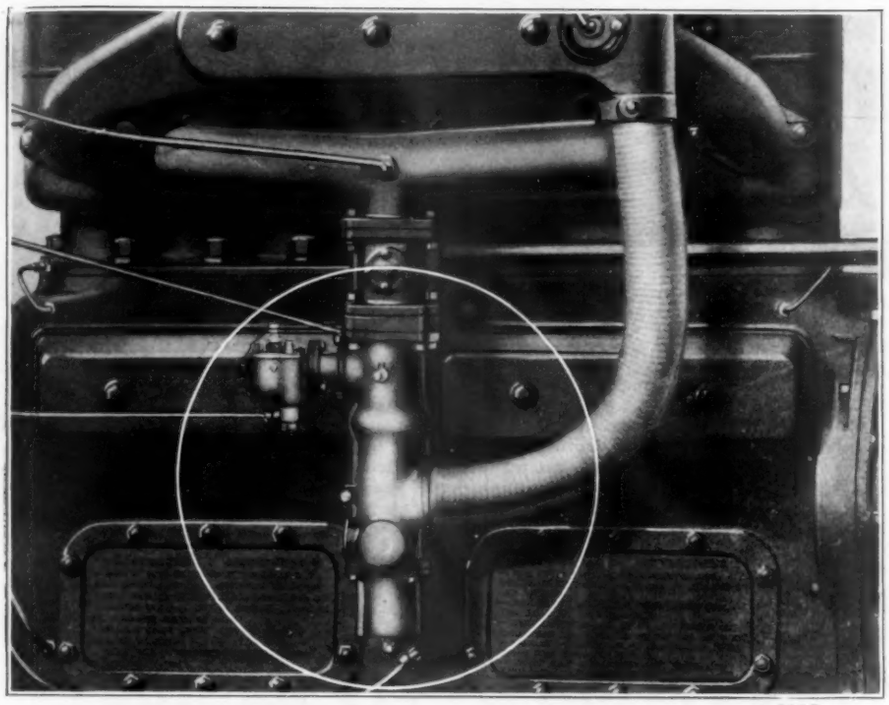

p-823-L

"GASPOWER" mounted on Manifold of 125 H. P. Waukesha Engine

"Gaspower" a new Waukesha Product

"GASPOWER" is the trade name of the Waukesha designed, laboratory tested, improved gas mixer for the operation of heavy-duty industrial engines. It handles with equal facility, "still," natural or artificial gas. It is highly responsive, instantly and automatically proportioning the fuel and air at every change of speed or load. It does not require adjusting—once set, always set. The maximum horse-power of the engine is delivered at every speed.

With the "Ricardo Head" Waukesha engine it affords the flexibility of steam. No volume tank is required, if a sensitive regulator is placed close to "GASPOWER." It works best on gas pressures not over 1 to 1½ ounces. It is an exclusive feature obtainable only with Waukesha "Ricardo Head" engines.

P-836-L

OIL INDUSTRY EQUIPMENT DIVISION

WAUKESHA MOTOR COMPANY

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New York	Tulsa	Houston	San Francisco
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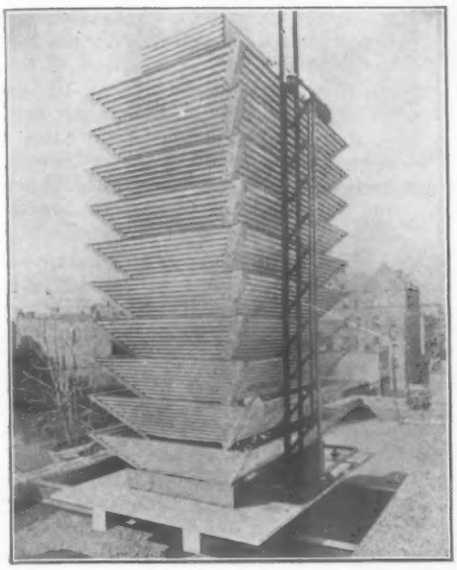
Exclusive Builders of Heavy Duty Gasoline Engines for Over Twenty Years

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS



Type T Tower

New Cooling Towers

THE COOLING TOWER COMPANY

The Cooling Tower Company, Inc., 15 John Street, New York, is now marketing small size cooling towers suitable for refrigerating machines and internal combustion engines.

The towers are rated in tons of refrigeration and engine horsepower, and each tower is of the right size for the particular job.

The towers come collapsed packed in one box. Both inlet and outlet connections are placed at the base of the tower. No foundations are necessary.

This type is of all-metal construction, both galvanized and painted. It is recommended for refrigerating machines with a capacity up to three tons of refrigeration and internal combustion engines up to 50 horsepower. It requires space four feet in diameter.

Type S-2 is for refrigerating machines with a capacity up to six tons of refrigeration and internal combustion engines up to 100 horsepower. It requires space five feet square.

The Type T tower meets the need for a larger tower than the Type S. Four sizes are furnished: T-1 for nine tons refrigeration and 150 horsepower, T-2 for 18 tons refrigeration and 200 horsepower, T-3 for 27 tons refrigeration and 300 horsepower and T-4 for 36 tons refrigeration and 400 horsepower.

The Type T tower has a steel frame fitted with either wood or steel louvres. The collecting basin can be of either wood or steel. These towers are furnished with decks and louvres made up so they can be set up within a few hours.

Additional information on all towers will be provided by request to the company.

Announcement was made recently by The Chisholm-Moore Manufacturing Company, Cleveland, Ohio, that its hoist division had been acquired by the Columbus McKinnon Chain Company, of Tonawanda, New York.

The general sales offices and factory will continue to operate in the same location, Cleveland, under the same name as in the past.

There will be no change in the personnel of the organization under the new ownership.

Moore Champion Derrick

LEE C. MOORE & COMPANY, INC.

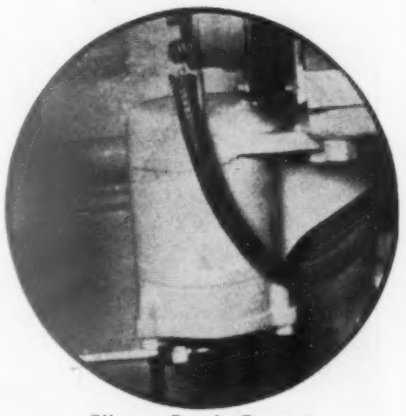
Lee C. Moore & Company, Inc., Pittsburgh and Tulsa, has put on the market a new derrick called the Moore Champion.

In addition to strength and rigidity, special attention has been given to ease of erection and of dismantling.

Features of the derrick include leg sections of galvanized 40-50 carbon A. P. I. seamless steel pipe, a new rolled steel plate clamp, through bolts in leg sections and clamps, interchangeable fronts, reinforced steel base plates, structural bracing which is furnished either aluminum painted or galvanized, and wing bracing in the bottom panels. The derrick conforms to A. P. I. specifications throughout.

Further information will be supplied by the company, on request .

Type S-1



Climax Spark Control

Climax Spark Control

CLIMAX ENGINEERING COMPANY

Climax Engineering Company, Clinton, Iowa, announces a new automatic spark control as a feature on all Climax engines. It is claimed that this control regulates the spark regardless of the load imposed upon the engine. The control works off the intake manifold where the variation in pressure is in proportion to the load imposed on the engine, thus ignition is properly timed.

The control can be quickly installed in the field on any Climax engine.

More information can be obtained from the company by request.

Bulletin Notice

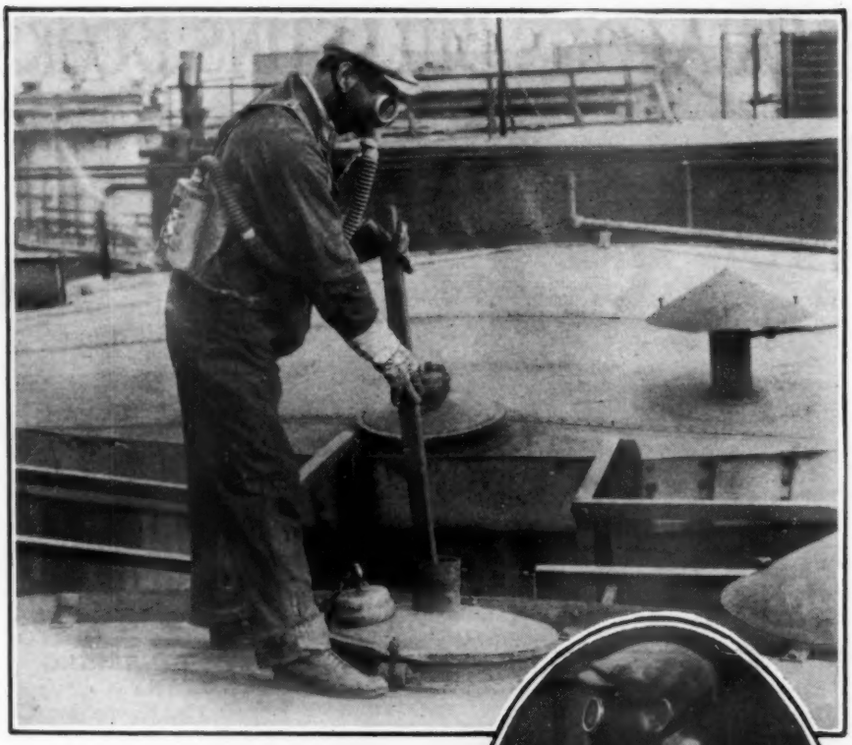
Ingersoll-Rand Company, 11 Broadway, New York, announces publication of a new 44-page bulletin on ER and FR compressors and vacuum pumps. These are the small and intermediate size machines produced by the company.

The compressors are furnished for handling either air or gas. They are of straight-line type and are built as single-stage, two-stage, or three-stage units. The single stage units are made in sizes having piston displacements of from 28 to 1084 cubic feet per minute at discharge pressures of 15 to 160 pounds to the square inch. The multi-stage units provide for discharge pressures up to 1750 pounds.

ER compressors and vacuum pumps are arranged for driving by short or long belt or by direct-connected synchronous motor. FR units are steam driven.

The vacuum pumps are single-stage machines that differ from the compressors only in the vacuum cylinder. With intake closed, they will pull 28 to 29 inches of vacuum referred to a 30-inch mercury column.

The bulletin, No. 3150, is available free of charge at any Ingersoll-Rand office.



New Safety Gas Mask

MINE SAFETY APPLIANCE COMPANY

A gas mask for use in gauging tanks is announced by the Mine Safety Appliance Company, Braddock Avenue and Thomas Boulevard, Pittsburgh, Pennsylvania. It is claimed that this mask affords complete protection against hydrogen sulphide gas and other fumes from sour crude and distillates.

The mask is a Canister type with single inhalation tube. The face piece fastens to two flexible inhalation tubes, one over each shoulder, joining a substantial Y connection in the back between the shoulders. It is claimed that this arrangement makes it practically impossible to twist the tubes and assures the wearer an uninterrupted supply of air even though one tube be temporarily closed. The mask is especially adapted to workers needing freedom from apparatus on the chest.

The Kops type face piece, standard for the United States army, is used on all tank gaugers masks. By means of adjustable head bands, the face piece is arraged to fit any face.

A deflector tube in the face conducts the dry incoming air over the non-shattering safety lenses and prevents fogging of the lenses.

The exhalation valve closes instantly on exhalation, it is said.

Further details can be secured by writing the company.

Wagner Electric Corporation announces the removal of its New York branch sales office from 50 Church Street to Suite 1110, 30 Church Street. The New York service station remains at 321 W. 54th Street.

Iverson Tool Company with headquarters in Tulsa, announces the opening of a field repair shop at Wink, Winkler County, Texas, in the heart of the Hendrick pool. The company specializes in fishing and drilling tools. Other shops are located at Artesia, New Mexico; Borger, Texas; Okmulgee, Okemah and Tulsa, Oklahoma.

New Bethlehem Plant Now in Operation

Sparrows Point, Maryland.—Bethlehem Steel Company is now operating all of the units of its new pipe mills here. These comprise two butt mills designed for the manufacture of butt-welded pipe from one-eighth to three inches in diameter, two lap mills equipped to manufacture all sizes of lap-welded pipe from two to 16 inches in diameter, a galvanizing department, and all auxiliary equipment together with large warehouse facilities.

The new mills are representative of the most modern practices in manufacture, according to the management of the company. They form an integral part of a self-contained plant which makes it possible to exercise close supervision of manufacture from receipt of the raw materials to release of the finished product.

Deep water docks available to the largest ocean-going vessels permit direct shipment by water to all intercoastal points as well as to European and other foreign ports.

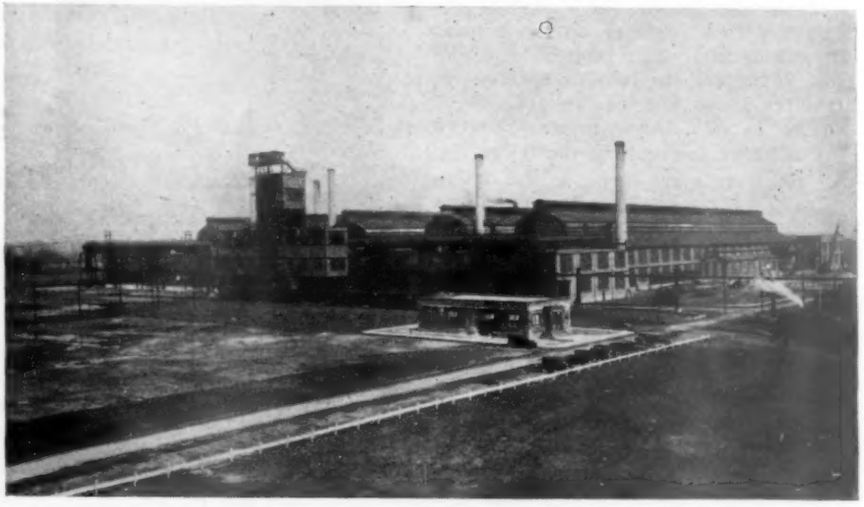
Three trunk-line railroads also are available.

A modern warehouse, 640 feet long by 110 feet wide, is served by two cranes and has storage capacity for large tonnage of butt and lap-welded pipe of various diameters. The plant has been so designed that when rush shipments are demanded, the pipe leaves directly from the shop without going through the warehouse.

Catalog Announcement

Pneumatic Tools and Accessories is the title of a new catalog published by the Chicago Pneumatic Tool Company, New York. As its title suggests, the catalog covers a wide range of air-operated devices ranging from small drills to hoists capable of handling 10,000 pounds.

Copies of the catalog may be secured by writing the company and asking for catalog No. 561.



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THE AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS has just issued an entirely new book of special papers presented at the New York meeting by geologists of international reputation in the petroleum industry and university circles. Fourteen authors discuss fundamentals of structure of the earth's crust in "THEORY OF CONTINENTAL DRIFT." Application to problems of petroleum geologists indicated in foreword by E. DeGolyer, President Amerada Petroleum Corp. Leading paper by W. A. J. M. van der Gracht, Vice-President Marland Oil Co.

240 pp., 29 figs., 6x9 in. Cloth. Price, $3.50, postpaid. Address: American Association of Petroleum Geologists, Box 1852, Tulsa, Oklahoma.

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SQUEAKS FROM THE BULL WHEEL

"How's the boy getting along at college, Si?"

"Fine! He's taken up swimming now. In his last letter he says he spends all of his time at Kelly pool."

The congregation of a Long Island church read this announcement in the weekly bulletin a recent Sunday:

"The ladies of this church have cast off clothing of all kinds. They may be seen in the basement of the church any afternoon this week."

Just one little hyphen missing, but what a whale of a difference!

As part of the of the matriculation examination in English, the entering students were asked to write a brief definition of their conception of a self-made man. One young woman wrote as follows:

"A self-made man is like a self-made cigarette—a lot of Bull wrapped in a transparent cover."

The foreman was talking to a negro who was looking for a place as a fireman, and asked him if he had any children.

"Yes, suh," was the answer, "I'se got a boy."

"What's his name?" asked the foreman.

"His name's Weatherstrip," was the reply.

"How'd he ever get such a name as that?"

"Well, you see, it was this way. He was born jus' befo' de wah, and he sho' kept me out of de draf'."

Chloride, the colored maid, had announced her impending departure.

"What's the matter, Chloride?" asked her mistress. "Aren't your wages sufficient? Don't we treat you right?"

"Wellum, de wages is all right, an' mostly you treats me right, but de trouble is dis: Dere am too much shiftin' of de dishes fo' de fewness of de victuals."

"Who made the first cotton gin?"

"Heavens! Are they making it from that too!"

"And now," said the monocled gentleman who had borrowed a match from the traffic cop, "I suppose you would like to know who I am?"

"Sure."

"I am Sir T. Willy Rockinghorse, Knight of the Bath, Knight of the Garter, Knight of the Double Eagle and Knight of the Golden Cross."

"And I," said the cop, "am James Murphy, tonight, last night, tomorrow night, and every other night."

My Bonnie lies over the ocean,
My Bonnie lies over the sea,
But while she is over there lying,
She's not here lying to me.

"I hear that you have lost your valuable little dog, Mr. Taylor."

"Ya-as, in a railway accident. I was saved but the dog was killed."

"What a pity!"

"This is sure a great country," said the recently arrived Swede lumberjack. "The foreman just told me you could buy a five-dollar money order for three cents."

Tommy: "Isn't 'wholesome' a funny word, father?"

Father: "What's funny about it?"

Tommy: "Why, take away the whole of it, and you have some left."
—London Answers.

"Good heavens, man, what is the matter with your face? Were you in an automobile accident?"

"No, I was being shaved by a lady barber when a mouse ran across the floor."

Electricity—What Is It?

Electricity is something that starts the Lord knows where and ends in the same place. It is faster on its feet, being 1-36 of a second speedier than its nearest competitor—backyard gossip—and when turned loose in Europe will get to the United States five hours before it starts. Nobody knows exactly what it is, because it has never stood still long enough. It is like your girl's younger brother in that you never know what to expect next, and the only way to handle it is with a switch. Rubber is the only thing that will stop it, which is why rubbernecks never get shocked, and rubber heels are shock absorbers, so they say in the subways.

Electricity is sometimes known as science gone crazy with the heat, and if you can understand its maneuvers you can do anything with it except open a can of peanut butter at a picnic. It had been locked up in ignorance throughout many centuries until Ben Franklin let it out with a pass key, and since then it has been pulling off more new stunts than the Russian government. With it you can start a conversation or stop one perpetually, cook dinner, curl your hair, press your trousers, blow up a battleship, run an automobile, or signal Mars, and many more things are being invented.

Like the price of rib roast, lightning seldom hits twice in the same place, but once it does hit there is little left. The Lord said, "Let there be light," and now all we must do is press the button.—Chester Skates in "Jeffery Service."

Permanence

The business world age must not be mistaken for sound judgment. As years go, this organization is young, yet it has grown large both in honor and in friendly relations. Three cardinal principles have contributed to this success: to make better products, to sell those products at an honest profit, and to accept full responsibility for our business commitments. On this basis only can a permanent business be built.

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